MANAGEMENT ACCOUNTING

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Table of Content

1. Financial Accounting

Learning Objectives:

After going through this lesson, you will be able to- · Understand the meaning and nature of accounting. · Differentiate between various types of accounting. · Know development of accounting principle. · Explain the importance of accounting.

Introduction

All business organizations work in an ever-changing dynamic environment. Any new programme of the organization or of its competitor will affect the business. In order to cope up of such nature, it is very much necessary for any organizations to have information that helps them in taking better decisions. Accounting is that system meant for measuring business activities, processing of information into reports and making the findings available to decision-makers. It is a continuous cycle of measurement of results and reporting of results to decision makers.

Accounting is the language of business; it is the language that managers use to communicate the firm's financial and economic information to external parties such as shareholders and creditors. The phrase "accounting is the language of business" is attributed to Warren Buffet, the chairman and CEO of Berkshire Hathaway, as he gave advice to a 17-year-old investment intern during a CNBC interview and phone call. Financial records and accounting reports tell the story of how a company is doing financially, so it's no wonder that accounting is often referred to as the language of business. When executives and decision makers talk about their companies' health, they typically refer to financial statements. Income, expenses, debt and liabilities are all components of financial documents and must be understood by anyone wanting to communicate clearly in the business world.

History of Accounting

Accounting is as old as money itself. The history of accounting can be traced to ancient civilizations. The early development of accounting dates back to ancient Mesopotamia, and is closely related to developments in writing, counting and money and early auditing systems by the ancient Egyptians and Babylonians. By the time of the Roman Empire, the government had access to detailed financial information.

In India Chanakya wrote a manuscript similar to a financial management book, during the period of the Mauryan Empire. His book "Arthashasthra" contains few detailed aspects of maintaining books of accounts for a Sovereign State.

The Italian Luca Pacioli, recognized as The Father of accounting and bookkeeping was the first person to publish a work on double-entry bookkeeping, and introduced the field in Italy.
The modern profession of the chartered accountant originated in Scotland in the 19th century. Accountants often belonged to the same associations as solicitors, who often offered accounting services to their clients. Early modern accounting had similarities to today's forensic accounting. Accounting began to transition into an organized profession in the nineteenth century, with local professional bodies in England merging to form the Institute of Chartered Accountants in England and Wales in 1880.

Book Keeping

Bookkeeping involves the recording, on a daily basis, of a company's financial transactions. It is concerned with recording of business transactions in chronological order in a systematic manner maintained by a book keeper. With proper bookkeeping, companies are able to track all information on its books to make key operating, investing, and financing decisions.

Bookkeepers are individuals who manage all financial data for companies. Without bookkeepers, companies would not be aware of their current financial position, as well as the transactions that occur within the company. Proper bookkeeping gives companies a reliable measure of their performance. It also provides information on general strategic decisions and a benchmark for its revenue and income goals.

Accounting

It is an art of recording, classifying, summarising, interpreting & communicating of business transaction to oversight agencies, regulators and tax collection entities. Regardless of the size of a business, accounting is a necessary function for decision making, cost planning, and measurement of economic performance measurement. The main purpose of accounting tells us whether the company is making profit or not? What is the cash flow of the business? what is the current value of the company's assets and liabilities? And which parts of the business is actually making money?

Definition of Accounting

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

- **American Institute of Certified Public Accountants**

"The process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of information".

- **American Accounting Association**

"The identifying, measuring, recording and communicating of financial information."

- **H. Bierman and A R Drebin**

Accountancy

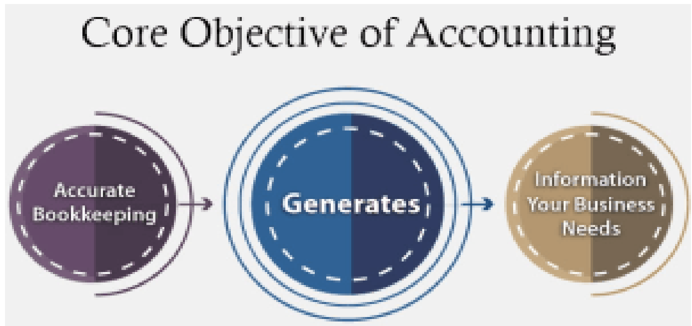
Accountancy is the practice of recording, classifying, and reporting on business transactions for a business. Accountancy covers those rules, regulations, procedures, principles, concepts, conventions, and techniques which are to be applied in the process of accounting. It is a broad term. It also includes Financial Accounting, Cost Accounting, Management Accounting, Tax Accounting and Government Accounting. Virtually, accountancy acts as a guide for the preparation of books of accounts, summarization of information and communicating the results to the concerned persons.

Difference between Book Keeping and Accounting

Basis	**Book keeping**	**Accounting**
Definition	Bookkeeping deals with identifying and recording financial transactions only	Accounting refers to the process of summarizing, interpreting and communicating the financial data of an organisation.
Basis of Accounting	It is the basis of accounting	It is the language of business
Preparation of Financial Statement	Not done in the case of bookkeeping	Financial statements are a part of the accounting process
Analysis	No analysis is required in the bookkeeping	Accounting analyzes the data and creates insights for the business
Persons Involved	The person concerned with bookkeeping is known as a bookkeeper	The person concerned with accounting is known as an accountant
Determining Financial Position	Bookkeeping does not show the financial position of a business	Accounting helps in showing a clear picture of the financial position of a business
Level of Learning	No high-level learning required	High-level learning required for understanding and analyzing accounting concepts

Objectives of Accounting

The core objectives of accounting:



1. Identification and recording of transactions

The primary object of accounting is to identify the financial transactions and to record these systematically in the books of accounts. As a result, the true nature of each and every transaction is known without much exercise of memory. With this end in view, the transactions are primarily recorded in general and in a special journal and later on permanently various accounts are kept in the ledger.

2. Ascertainment of results

Every business concern is interested to know its operating results at the end of a particular period. The amount of profit or loss for a particular period of a business concern can be ascertained by preparing an income statement with the help of ledger account balances of revenue nature.

3. Ascertainment of financial affairs

Ascertainment of debts-liabilities, property, and assets i.e. total financial affairs of an organization at a particular date is another important object of Accounting. Financial affairs of concern at a particular date can be ascertained by preparing a balance sheet. The balance sheet is the statement of assets and liabilities of concern at a particular date.

4. Keeping accounts of cash

Cash book is a prominent book of the books of accounts. Cash receipts and cash payments are accounted for in this book. Fraud, forgery, and misappropriation of money are reduced by keeping cash book scientifically and accurately.

5. Control over assets and liabilities

For running a business successfully a businessman is to acquire various assets like land, building, machinery, etc. The actual position of the debts-liabilities, property, and assets can be ascertained through the proper keeping of accounts. A businessman can take the right steps for controlling the quantity of assets decrease and liability increase.

6. Controlling money defalcation and cost

Prevention of money defalcation through fraud and forgery and controlling the cost of concern are also the main objects of Accounting. Prevention of money defalcation and cost control become easier if accounts are kept scientifically.

7. Providing economic data

Another noble object of accounting is to provide the concerned parties with all economic information preparing financial statements and reports etc. in time.

8. Helping tax fixation

Accounts prepared on the basis of accepted accounting principles in considered reliable to the income tax and GST authorities for easy determination and settlement of tax and GST.

9. Determination and evaluation of policy

The object of accounting is to help the management in determining and evaluating the management policies in running the business successfully by supplying necessary, information, interpreting and analyzing the financial statements.

10. Testing the arithmetical accuracy of accounts

One of the main objects of scientific methods of accounting is to make sure that accounts have been kept in a proper way. The arithmetical accuracy of accounts kept in the ledger can be assured by preparing a trial balance. Agreement of a trial balance is the proof of the arithmetical accuracy of accounts.

11. Acceptability to others

Banks or financial institutions are interested to know the accurate financial position of business concern for sanctioning loans. On the other hand, the government or other authorities may also ask about the financial position of business concern for various reasons. The accounts maintained in a disciplined way become easily acceptable to the interested institutions or authorities.

12. Creation of values and accountability

The object of accounts maintained in an acceptable way is to create higher values among individuals and organizations and thereby creating awareness in preventing money defalcation, misappropriation of fund and cost control by ensuring transparency and accountability.

Basic terms in Accounting

1. Asset

An asset is anything of value or a resource of value that can be converted into cash. It is any resource owned by a business or an economic entity having economic value useful to the owner.

Types of assets

- **Fixed Assets:** A fixed asset is a long-term tangible piece of property or equipment that a firm owns and uses in its operations to generate income. **Examples:** Vehicles such as company trucks, Office furniture, Machinery, Buildings, Land
- **Current assets:** Current assets represent all the assets of a company that are expected to be conveniently sold, consumed, used, or exhausted through standard business operations with one year. **Examples:** Cash, Bank balance, Stock or Inventory, Accounts Receivable or Debtors, Marketable Securities, Prepaid Expenses, etc..

- **Liquid assets:** A liquid asset is a reference to cash on hand or an asset that can be readily converted to cash. An asset that can readily be converted into cash is similar to cash itself because the asset can be sold with little impact on its value. **Examples:** Gold, A/Rs, Marketable Securities
- **Fictitious assets:** Asset created by an accounting entry that has no tangible existence or realizable value but represents actual cash expenditure. Fictitious assets are written off as soon as possible against the firm's earnings. **Examples:** preliminary expense, advertisement expenses, discount on issue of shares and debentures.
- **Wasting assets:** A wasting asset is an item that has a limited life span and irreversibly declines in value over time. It is a property or security that has a limited life and loses value over its life. **Examples**: Contracts, an oil well, or coal mine

2. Liabilities:

A liability is something a person or company owes, usually a sum of money. Liabilities are settled over time through the transfer of economic benefits including money, goods, or services.

Types of liabilities

- **Current liabilities:** Current liabilities are a company's short-term financial obligations that are due within one year or within a normal operating cycle. Examples: Accounts payable, **short-term** debt, dividends, and notes payable
- **Fixed liabilities:** they are debts or obligations that are due in over a year's time. Long-term liabilities are an important part of a company's long-term financing. **Examples:** debts. bonds, mortgages or loans
- **Contingent Liabilities:** Contingent liabilities are liabilities that may occur, depending on the outcome of a future event. Therefore, contingent liabilities are potential liabilities. **Examples:** Lawsuits, Product warranties, etc..

3. Capital:

It means that amount or asset which is invested in business by businessman or owner of business. When the business is closed, after paying outside creditors, balance amount will be his capital which he can obtain. **Capital** assets are assets of a business found on either the current or long-**term** portion of the balance sheet.

4. **Drawings:**

   A drawing account is an accounting record maintained to track money withdrawn from a business by its owners. A drawing account is used primarily for businesses that are taxed as sole proprietorships or partnerships.

Generally Accepted Accounting Principles (GAAP)

Generally accepted accounting principles (GAAP) refer to a common set of accounting principles, standards, and procedures issued by the Financial Accounting Standards Board (FASB). GAAP helps govern the world of accounting according to general rules and guidelines. It attempts to standardize and regulate the definitions, assumptions, and methods used in accounting across all industries. It is classified into two. They are;

- Accounting Concepts
- Accounting conventions

Accounting Concepts:

It refers to the basic assumptions and rules and principles which work as the basis of recording of business transactions and preparing accounts. The main objective is to maintain uniformity and consistency in accounting records. Following are the various accounting concepts that have been discussed in the following sections:

1. **Business entity concept:** A business and its owner should be treated separately as far as their financial transactions are concerned.
2. **Money measurement concept:** Only business transactions that can be expressed in terms of money are recorded in accounting, though records of other types of transactions may be kept separately.
3. **Dual aspect concept:** For every credit, a corresponding debit is made. The recording of a transaction is complete only with this dual aspect.
4. **Going concern concept:** In accounting, a business is expected to continue for a fairly long time and carry out its commitments and obligations. This assumes that the business will not be forced to stop functioning and liquidate its assets at “fire-sale” prices.

5. **Cost concept:** The fixed assets of a business are recorded on the basis of their original cost in the first year of accounting. Subsequently, these assets are recorded minus depreciation. No rise or fall in market price is taken into account. The concept applies only to fixed assets.
6. **Accounting year concept:** Each business chooses a specific time period to complete a cycle of the accounting process—for example, monthly, quarterly, or annually—as per a fiscal or a calendar year.
7. **Matching concept:** This principle dictates that for every entry of revenue recorded in a given accounting period, an equal expense entry has to be recorded for correctly calculating profit or loss in a given period.
8. **Realization concept:** According to this concept, profit is recognised only when it is earned. An advance or fee paid is not considered a profit until the goods or services have been delivered to the buyer.

Accounting Conventions

Accounting conventions are guidelines used to help companies determine how to record certain business transactions that have not yet been fully addressed by accounting standards. These procedures and principles are not legally binding but are generally accepted by accounting bodies. Following are the various accounting conventions that have been discussed in the following sections:

1. Conservatism

The accountant has to follow the conservatism principle of "playing safe" while preparing financial statements, considering all possible scenarios of loss while recording transactions. There are specific points used for criticizing such a principle. And this affects the principle of 'true and fair status of financial conditions.'

2. Consistency

This principle is helpful for investors and analysts to read, understand, and compare the financial statements of the company. If the company wants to make a change in method, it should do so only with proper reasons to make specific changes.

3. Full Disclosure

Relevant and important information regarding the financial status of the company must be revealed in financial statements even after the application of the accounting convention. E.g., Contingent Liabilities, Law Suits against a business should be reported in adjoined notes in the financial statements of the company.

4. Materiality

Materiality Concept includes the impact of event or item and its relevance in financial statements. The accountant must report all such events and items that might influence the decision of investors or analysts. It means materiality allows an accountant to ignore certain principles when items are not material.

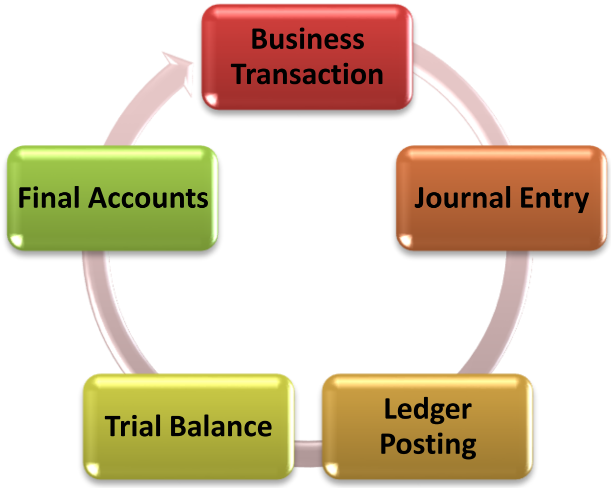
Systems of Accounting

Systems of accounting refer to the two systems of recording the financial transactions in the books of accounts. There are two systems of accounting. They are;

1) Cash System of Accounting: This system records only cash receipts and payments. This system assumes that there are no credit transactions. In this system of accounting, expenses are considered only when they are paid and incomes are considered when they are actually received. This system is used by the organizations which are established for nonprofit purpose.
2) Mercantile or Accrual System of Accounting: In this system, expenses and incomes are considered during that period to which they pertain. This system of accounting is considered to be ideal but it may result into unrealized profits which might reflect in the books of the accounts on which the organization have to pay taxes too. All the company forms of organization are legally required to follow Mercantile or Accrual System of Accounting.

Accounting Cycle

The sequence of steps followed in the accounting process to measure business transactions and transform the measurements into financial statements for a specific period.



Classification of Accounts

According to traditional approach, the accounts are classified into four types – personal accounts, real accounts, nominal accounts, and valuation accounts.

1. Personal accounts:

The accounts related to real persons and organizations are classified as personal accounts. Examples of personal accounts include John's account, Peter's account, Procter and Gamble's account, Vibrant Marketing Agency's account and City bank's account etc. The business keeps a separate account for each individual and organization for the purpose of ascertaining the balance due from or due to them. It is further classified as:

a. **Natural Personal Accounts:** Natural Persons are human beings. Therefore, we include the accounts belonging to them under this head.

b. **Artificial Personal Accounts:** Artificial persons are not human beings but can act and work like humans. They have a separate identity in the eyes of law and are capable to enter into agreements.

c. **Representative Personal Accounts:** These accounts represent the accounts of natural or artificial persons. When the expenses become outstanding or pre-paid and incomes become accrued or unearned, they fall under this category.

2. Real accounts:

Real accounts are accounts related to assets or properties (both tangible and intangible) owned by a business enterprise. Examples of real accounts include cash account, inventory account, investment account, plant account, building account, goodwill account, patent account, copyright account etc.

3. Nominal accounts:

The accounts related to incomes, gains, expenses and losses are classified as nominal accounts. These accounts normally serve the purpose of accumulating data needed for preparing income statement or profit and loss account of the business for a particular period. Examples of nominal accounts include sales account, purchases account, wages account, salaries account, interest account, rent account, gain on sale of fixed assets account and loss on sale of fixed assets account etc.

Golden Rules of Accounting

Type of Account	Rules for Debit	Rules for Credit
Personal Account	Debit the Receiver	Credit the Giver
Real Account	Debit what comes in	Credit what goes out
Nominal account	Debit all expenses & Losses	Credit all incomes & gains

Accounting Equation

The accounting equation is considered to be the foundation of the double entry accounting system. The accounting equation shows on a company's balance that a company's total assets are equal to the sum of the company's liabilities and shareholders' equity.

Basic Accounting Equation

Problems on Accounting Equation

1. Analyze each one of the following transactions into accounting equations and give the summary action that results after all the transactions.
   a. Rama commences business with Rs. 3,000 in cash, Rs. 2,000 inventory and Rs. 2,000 in furniture.
   b. He opens a current account with Bank of India and deposits Rs. 2,500
   c. Purchases goods worth Rs. 5,000 on credit.
   d. Sells goods costing Rs. 2,000 for Rs. 2,500 on credit
   e. Makes a payment of Rs. 500 by way of office expenses.
   f. Pays Rs. 2,000 to the trade creditors.
   g. Appoints a cashier who pays Rs. 5,000 as earnest deposit
   h. Fixed deposit is opened for Rs. 5,000 with Bank of India
   i. Received Rs. 500 from trade debtors.
   j. Paid interest expenses Rs. 800.

Solution:

Sl.No	particulars	Assets		Total	Particulars	Capital	Liabilities	Total
		Current Assets	Fixed Assets					
1	**2**	**3**	**4**	**5 (3+4)**	**6**	**7**	**8**	**9 (7+8)**
A	Cash (in) Stock (in) Furniture (in)	(+) 3,000 (+) 2,000	(+) 2,000	(+)7,000	Capital	(+)7,000	-----	(+)7,000
B	Bank Cash	(+) 2,500 (-) 2,500	-----	-----	-----	-----	-----	-----
C	Stock (in)	(+) 5,000		(+)5,000	Creditor		(+) 5,000	(+)5,000
Total		**(+) 10,000**	**(+) 2,000**	**(+) 12,000**	**Total**	**(+) 7,000**	**(+) 5,000**	**(+) 12,000**
D	Stock (out) Cash (in)	(-) 2,000 (+) 2,500	-----	(+) 500	Profit on sale	(+) 500	-----	(+) 500
E	Cash (out)	(-) 500	-----	(-) 500	Expenditure	(-) 500	-----	(-) 500
F	Cash (out)	(-) 2,000	-----	(-) 2,000	Creditor		(-) 2,000	(-) 2,000
Total		**(+) 8,000**	**(+) 2,000**	**(+) 10,000**	**Total**	**(+) 7,000**	**(+) 3,000**	**(+) 10,000**
G	Cash (in)	(+) 5,000	-----	(+) 5,000	Liability		(+) 5,000	(+) 5,000
H	Bank Cash (out)	(+) 5,000 (-) 5,000	-----	-----	-----	-----	-----	-----
I	Cash (in) Debtor	(+) 500 (-) 500	-----	-----	-----	-----	-----	-----
J	Cash (out)	(-) 800	-----	(-) 800	Expenditure	(-) 800	-----	(-) 800
Total		**(+) 12,200**	**(+) 2,000**	**(+) 14,200**	**Total**	**(+) 6,200**	**(+) 8,000**	**(+) 14,200**

2. Analyze the effects of these transactions on the accounting equation.
   a. Suresh began business with Rs. 50,000 in cash.
   b. Took a loan of Rs. 20,000 from Manish.
   c. Purchases for cash two computers each costing Rs. 29,000.
   d. Purchased supplies of floppy disks and stationery for Rs. 6,000 on credit.
   e. Received Rs. 12,000 in cash for software sales.
   f. Paid creditors for suppliers Rs. 2,000
   g. Paid salaries to employees Rs. 4,000 and office rent Rs. 1,200
   h. Sold software on credit Rs. 8,000
   i. Withdrew Rs. 3,500 in cash for personal use.

Solution:

Sl.No	Particulars	Assets		Total	particulars	Capital	Liabilities	Total
		Current Assets	Fixed Assets					
1	2	3	4	5 (3+4)	6	7	8	9 (7+8)
A	Cash (in)	(+) 50,000	-----	(+) 50,000	Capital	(+) 50,000	-----	(+) 50,000
B	Cash (in)	(+) 20,000	-----	(+) 20,000	Liability	-----	(+) 20,000	(+) 20,000
C	Cash (out) Computer (in)	(-) 58,000	(+)58,000	-----	-----	-----	-----	-----
D	Stock (in)	(+) 6,000	-----	(+) 6,000	Creditor	-----	(+) 6,000	-----
	Total	**(+) 18,000**	**(+) 58,000**	**(+) 76,000**	**Total**	**(+)50,000**	**(+) 26,000**	**(+) 76,000**
E	Cash (in)	(+) 12,000	-----	(+) 12,000	Income	(+) 12,000	-----	(+) 12,000

F	Cash (out)	(-) 2,000	-----	(-) 2,000	Creditor	-----	(-) 2,000	(-) 2,000
G	Cash (out)	(-) 5,200	-----	(-) 5,200	Expenditure	(-) 5,200	-----	(-) 5,200
H	Debtor	(+) 8,000	-----	(+) 8,000	Income	(+) 8,000	-----	(+) 8,000
I	Cash (out)	(-) 3,500	-----	(-) 3,500	Drawings	(-) 3,500	-----	(-) 3,500
	Total	**(+) 27,300**	**(+) 58,000**	**(+) 85,300**	**Total**	**(+) 61,300**	**(+) 24,000**	**(+) 85,300**

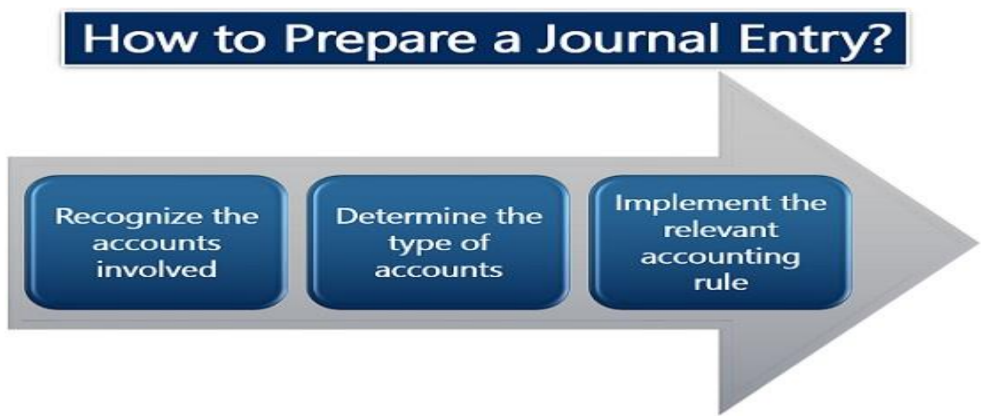
3. Show the accounting equation on the basis of the following transactions:
   a. Amit commenced business with Rs. 30,000
   b. Purchased goods on credit Rs. 10,000
   c. Withdrew for private use Rs. 1,500
   d. Purchased goods for cash Rs. 2,000
   e. Paid wages Rs. 500
   f. Paid to creditors RS. 1,000
   g. Sold goods on credit Rs. 2,000
   h. Sold goods for cash Rs. 2,000 (costing Rs. 1,500)
   i. Outstanding salary Rs. 500
   j. Paid rent in advance Rs. 1,000

Solution is as follows:

Sl.No	Particulars	Assets		Total	particulars	Capital	Liabilities	total
		Current Assets	Fixed Assets					
1	**2**	**3**	**4**	**5 (3+4)**	**6**	**7**	**8**	**9 (7+8)**
A	Cash (in)	(+) 30,000	-----	(+) 30,000	Capital	(+) 30,000	-----	(+) 30,000
B	Stock (in)	(+) 10,000	-----	(+) 10,000	Creditor	-----	(+) 10,000	(+) 10,000
C	Cash (out)	(-) 1,500	-----	(-) 1,500	Drawings	(-) 1,500	-----	(-) 1,500
D	Stock (out) Cash (in)	(+) 2,000 (-) 2,000	-----	-----	-----	-----	-----	-----
Total		**(+) 38,500**	**-----**	**(+) 38,500**	**Total**	**(+) 28,500**	**(+) 10,000**	**(+)38,500**
E	Cash (out)	(-) 500	-----	(-) 500	Expenditure	(-) 500		(-) 500
F	Cash (out)	(-) 1,000	-----	(-) 1,000	Creditor	-----	(-) 1,000	(-) 1,000
G	Stock (out) Debtor	(-) 2,000 (+) 2,000	-----	-----	-----	-----	-----	-----
H	Cash (out) Stock (in)	(+) 2,000 (-) 1,500	-----	(+) 500	Profit	(+) 500	-----	(+) 500
I	-----	-----	-----	-----	Expenditure Liability	(-) 500	(+) 500	-----
J	Cash (out) Advance	(-) 1,000 (+) 1,000	-----	-----	-----	-----	-----	-----
Total		**(+) 37,500**	**-----**	**(+) 37,500**	**Total**	**(+) 28,000**	**(+) 9,500**	**(+) 37,500**

Journal Entries

Journal entries are the first step in the accounting cycle and are used to record all business transactions and events in the accounting system. It is a book meant for the original recording of the day to day business transactions or activities in a systematic order.



Format of Journal Entry

Date	Particular	L.F.	Debit ($)	Credit ($)
DD/MM/YYYY	____________ A/c .... Dr.		xxxx	
	To ____________ A/c			xxxx
	(Being ______________)			
	(Narration)			

Ledger Posting

A ledger is basically a record in which we record transactions of a specific nature. Every ledger relates to a particular person, asset, expense or revenue. The process of transferring the entries from journal to respective **ledger** accounts is called **ledger posting**. Balancing of **ledgers** is carried to find out differences at the end of the year. **Ledger posting** is entering information in the **ledger**, in respective accounts from the journal for individual records.

Rules of Posting:

The basic rules of posting are as under:

(a) The name of the same account, should not be written in the account in which posting is being made.

(b) Every debit has its own and equal credit.

Format of Ledger a/c

FORMAT OF LEDGER ACCOUNT

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)

Problems of Journal Entries

1. Journalise the following transaction in the book of Mr. Suresh:
    a. Commenced a business with Rs. 60,000.
    b. Bought machine worth Rs. 1,00,000 and furniture worth Rs. 20,000.
    c. Paid towards stationary Rs. 2,000
    d. Purchased goods worth Rs. 50,000 on each from Kumar and Co.
    e. Sold goods for cash worth Rs. 10,000 to Pandu.
    f. Bought a computer worth Rs. 40,000
    g. Received commission of Rs. 10,000
    h. Received dividend of Rs. 2,000 on the investment.
    i. Paid salary Rs. 20,000 for eight months (due for remaining 4 months)

SOLUTION AS FOLLOWS:

Sl.No	Particulars	LF	Debit	Credit
a.	Cash A/c …………………………Dr.(in)		60,000	
	To Capital A/c			60,000
	(Being business commenced)			
b.	Machinery A/c ------------Dr (comes in)		1,00,000	
	Furniture A/c -------------Dr (comes in)		20,000	
	To Cash A/c (going out)			1,20,000
	(being machinery and furniture purchased)			
c.	Stationery A/c ------------- Dr (expenditure)		2,000	

	To Cash A/c (going out) (being stationery purchased)			2,000
d.	Purchases A/c ------------- Dr (expenditure) To Kumar & Co. A/c (giver) (being purchased goods on credit)		50,000	 50,000
e.	Cash A/c ----------------- Dr (comes in) To Sales A/c (income) (being goods sold)		10,000	 10,000
f.	Computer A/c ---------------------- Dr. (in) To Cash A/c (going out) (being computer purchased)		40,000	 40,000
g.	Cash A/c -------------------- Dr (coming in) To commission A/c (income) (being commission received)		10,000	 10,000
h.	Cash A/c ------------------ Dr (coming in) To Dividend A/c (income) (being dividend received)		2,000	 2,000
i.	Salary A/c ----------------- Dr (expenditure) To Outstanding salary A/c (liability) To Cash A/c (going out) (being salary and paid for 8 month and outstanding for 4 months)		30,000	 10,000 20,000

2. Record the following transaction in the journal of Mr. X:
    a. Started business with Rs. 1, 00,000.
    b. Purchased goods worth Rs. 50,000 less 20% trade discount and 5% cash discount.
    c. Bought 100 shares of Bharathi Ltd, at Rs. 15 per share, brokerage paid Rs. 25.
    d. Purchased a motor car in exchange of goods Rs. 20,000 and cash Rs. 30,000.
    e. Sold goods to MR. Y for Rs. 60,000 on credit.
    f. Purchased goods from Ram Rs. 25,000
    g. Goods distributed as free samples of Rs. 1,000
    h. Mr. Y became insolvent and only a dividend of 50 paise is recovered from his estate.
    i. Cash Rs. 5,000 is withdrawn by the proprietor for his personal use.
    j. Paid into bank Rs. 5,000.

SOLUTION AS FOLLOWS:

Sl.No	Particulars	LF	Debit	Credit
a.	Cash A/c ……………………………Dr.(in)		1,00,000	
	To Capital A/c			1,00,000
	(Being business commenced)			
b.	Purchases A/c ………….. Dr (expense)		50,000	
	To Trade Discount A/c (income)			10,000
	To Cash Discount A/c (income)			2,000
	To Cash A/c (going out)			38,000
	(being goods purchases)			

c.	Investment A/c ------------------- Dr. (asset) To Cash A/c (going out) (being investment purchases)		1,500	 1,500
	Brokerage A/c -------------------- Dr (expense) To cash A/c (going out) (being brokerage incurred)		25	 25
d.	Motor Car A/c -------------------- Dr (coming in) To purchases A/c (going out) To cash A/c (going out) (being vehicle purchased in exchange of goods and paid by cash)		50,000	 20,000 30,000
e.	Mr. Y A/c ---------------------- Dr (receiver) To sales A/c (income) (being goods sold on credit)		60,000	 60,000
f.	Purchases A/c ---------------------- Dr (expense) To Ram A/c (giver) (being goods purchases on credit)		25,000	 25,000
g.	Advertisement A/c----------------- Dr (loss) To Purchases A/c (being goods distributed on free samples)		1,000	 1,000
h.	Cash A/c --------------------- Dr (coming in) Bad Debts A/c ----------------- Dr (loss)		30,000 30,000	

	To Mr. Y A/c (giver) (being cash received from Y in full settlement)			60,000
I	Drawings A/c ---------------------- Dr (expense) To cash A/c (coming out) (being cash used for personnel use)		5,000	 5,000
J	Bank A/c ------------------------ Dr (receiver) To cash A/c (going out) (being cash deposited into bank)		5,000	 5,000

Cash Book

A cash book is that unique book of accounts which fulfils the objective of both, a journal and a ledger. Like a journal, it is the first book which records all the cash transactions of the business. It also acts as a subsidiary book to post all the cash transactions, similar to a cash account in the ledger.

Problems on cash book

1. Prepare three column cash book from the following transactions:
    - **a.** Aug 1st cash in hand Rs. 25,000 and bank balance Rs. 40,000
    - **b.** Aug 2nd purchased goods for cash Rs. 5,000
    - **c.** Aug 4th sold goods on account to vikas Rs. 8,000
    - **d.** Aug 6th purchased office furniture and issued a cheque Rs. 5,000
    - **e.** Aug 7th drawn from bank for office use Rs. 2,000 and for personal use Rs. 1,000
    - **f.** Aug 9th purchased goods for cash Rs. 15,000
    - **g.** Aug 12th received from vikas a cheque to settle his account and discount allowed to him Rs. 100
    - **h.** Aug 13th purchased motor cycle on account from saikrupa motors from Rs. 30,000
    - **i.** Aug 15th paid wages Rs. 500.
    - **j.** Aug 18th sold goods for cash Rs. 10,000.

Three Column Cash Book

Date	Receipt	Discount	Cash	Bank	Date	Payments	Discount	Cash	Bank
1st	To Balance B/d		25,000	40,000	2nd	By Purchases A/c		5,000	
7th	To Bank A/c (C)		2,000		6th	By Furniture A/c			5,000
12th	To Vikas A/c	100		7,900	7th	By Cash A/c (C)			2,000
18th	To Sales A/c		10,000		7th	By Drawings A/c			1,000
					9th	By Purchases A/c		15,000	
					15th	By Wages A/c		500	
					31st	By Balance C/d (B/f)		16,500	39,900
		100	37,000	47,900			---	37,000	47,900
1st Sep	By Balance B/d		16,500	39,900					

2. Enter the following transactions in a three column cash book of Mr. suresh:

- **a.** Feb 1st cash balance Rs. 3,000 and at bank Rs. 10,000
- **b.** Feb 2nd cash received from Mr. rakesh Rs. 1950 in full settlement of Rs. 2,000.
- **c.** Feb 5th purchased goods and paid by cheque Rs. 1,000.
- **d.** Feb 6th received a cheque from rajesh Rs. 2,000
- **e.** Feb 7th deposited the cheque in the bank
- **f.** Feb 11th paid rent in cash Rs. 500
- **g.** Feb 14th paid Mr. ganesh Rs. 580 by a cheque and he allowed discount Rs. 20.
- **h.** Feb 18th cash withdrawn from bank for office use Rs. 1,000
- **i.** Feb 19th stationery purchased Rs. 100
- **j.** Feb 24th draw from bank for personal use Rs. 5000

Solution:

Date	Receipt	Discount	Cash	Bank	Date	Payments	Discount	Cash	Bank
1st	To Balance B/d		3,000	10,000	5th	By Purchases A/c			1,000
2nd	To Rakesh A/c	50	1,950		7th	By Bank A/c (C)		2,000	
6th	To Rajesh A/c		2,000		11th	By Rent A/c		500	
7th	To Cash A/c (C)			2,000	14th	By Ganesh A/c	20		580
					18th	By Cash A/c (C)			1,000
					19th	By Stationery A/c		100	
18th	To Bank A/c		1,000		24th	By Drawings A/c			5,000
					29th	By Balance C/d (B/f)		5,350	4,420
	Total	50	7,950	12,000		Total	20	7,950	12,000
1st	By Balance B/d		5,350	4,420					

Trial Balance

A trial balance is a bookkeeping worksheet in which the balance of all ledgers is compiled into debit and credit account column totals that are equal. A company prepares a trial balance periodically, usually at the end of every reporting period.

Advantages of Trial Balance

Arithmetical accuracy

Given the nature of double entry system, every transaction will result in two entries of equal and opposite nature. Hence at any point in time all debit ledger totals will match to credit ledger totals. Since Trial Balance lists all the accounts as on a particular date, the debit total of a trial balance must match to the credit total.

Therefore a Trial Balance is an indicator of the Arithmetical accuracy of the books of accounts. With softwares being used for accounting, the above advantage of the trial balance is not very relevant. As data entry systems does not allow entries to be posted if there is a difference in the debit and credit amount hence leaving no room for error.

Bird's-eye view

A trial balance is a summary sheet listing all ledges and balances. Hence it provides a bird eye view of the accounting transactions of an organization.

Prerequisite for preparation of Financial statements

An organization needs to know profit or loss and financial position at year end. And thus to prepare financial statements, Trial Balance is prerequisite. All stakeholders also need this information. It is the first step towards closure of accounts for a particular period.

Uses of Trial Balance

Ease of posting adjustments

A tallied Trial Balance offers significant comfort regarding accuracy and hence post TB adjustments can be affected.

Aids in Audit

Trial Balance gives a list of all ledgers with balances. For the purpose of audit the trial balance is analyzed. For example if the nature of an account is debit, but it holds a credit balance, then the entire ledger will be scrutinized. So trial balance is also an important tool for auditors.

Defines credibility

Trial Balance is also used by Banks and lending agencies to understand the borrowing capacity of the business and credibility. Despite the numerous benefits of a Trial balance, it is imperative to understand that a tallied Trial Balance does not ensure zero errors. If there are offsetting errors, the Trial Balance will tally despite the error.

Problems on Trial Balance

1. From the following balance extracted from the books of gopal as on 31st Dec, 2014, Prepare a Trial Balance.

Gopal’s Capital	70000	Plant & Machinery	40000
Purchases	80000	Sales	96000
Rent paid	2400	S. Debtors	56000
Gopal’s Drawings	4000	Furniture	5000
B/Rs	12000	Salaries	7200
Opening stock	10000	S. Creditors	56000
Purchase Returns	2800	Carriage	1000
Sales Returns	1600	Insurance	400
Cash in Hand	1000	Cash at Bank	19500
Commission Paid	400	B/Ps	15800
Discount received	300	Discount allowed	400

Solution:

Particulars	**Debit (Rs)**	**Credit (Rs)**
Gopal's Capital		70000
Purchases	80000	
Rent paid	2400	
Gopal's Drawings	4000	
B/Rs	12000	
Opening stock	10000	
Purchase Returns		2800
Sales Returns	1600	
Cash in Hand	1000	
Commission Paid	400	
Discount received		300
Plant & Machinery	40000	
Sales		96000
S. Debtors	56000	
Furniture	5000	
Salaries	7200	
S. Creditors		56000
Carriage	1000	
Insurance	400	
Cash at Bank	19500	
B/Ps		15800
Discount allowed	400	
Total	**240900**	**240900**

Additional Problems for Practice

1. Analyse the effects of these transaction on the accounting equation:
   a. March 1st Suresh began business with Rs. 1,50,000 cash and Rs. 20,000 bank.
   b. March 2nd Took a loan of Rs. 50,000 from Mahesh.
   c. March 3rd purchased for cash two computers each costing Rs. 50,000 and goods costing Rs. 25,000 on credit
   d. March 4th paid to creditors Rs. 5,000
   e. March 10th paid salary to employees Rs. 5,000 and office rent Rs. 2,000
   f. March 12th sold goods or credit Rs. 10,000
   g. March15th withdrew Rs. 5,000 in cash for personal use
   h. March 18th withdrew from bank Rs. 2,000
   i. March 20th purchase goods worth Rs. 50,000
   j. March 25th sold goods on cash Rs. 20,000

2. Show the accounting equation on the basis of the following transactions:
   a. Mr. Suresh started business with cash Rs. 1,00,000.
   b. Purchased goods on credit Rs. 60,000
   c. Purchased furniture for cash Rs. 20,000
   d. Sold goods costing Rs. 30,000 for Rs. 50,000
   e. Sold goods costing Rs. 30,000 on credit for Rs. 52,000.
   f. Bought goods worth Rs. 30,000 (Rs. 25,000 paid in cash and balance on credit).
   g. Drawn for personal sue Rs. 2,000
   h. Paid for rent Rs. 2,000
   i. Paid for salary Rs. 4,000
   j. Paid to creditors Rs. 40,000
   k. Received from debtors Rs. 12,000

3. From the following transaction relating to Mr. Jigar, show the effect on his assets, liabilities and capital by using accounting equation.
   k. Started business with cash Rs. 10,000
   l. Purchased goods on credit Rs. 8,000

m. Plant purchased for cash Rs. 2,000
n. Sold goods costing Rs. 1,000 for Rs. 2,000 for cash.
o. Sold goods on credit to Mahendra costing Rs. 800 for Rs. 1,500.
p. Draw for personal use Rs. 500
q. Paid salaries Rs. 300
r. Received from Mahendra Rs. 700
s. Goods destroyed by fire Rs. 100

4. Journalize the following transactions in the books of the firm:
   a. Mr. F started business with cash Rs. 50,000.
   b. He deposited cash into bank Rs. 10,000.
   c. Purchased goods for cash Rs. 20,000
   d. Sold goods for cash Rs. 7,000.
   e. Purchased furniture and paid by cheque Rs. 4,000
   f. Sold goods to Arvind Rs. 4,000
   g. Purchased good from Amrit Rs. 10,000
   h. Returned goods to Amrit Rs. 5,000
   i. Received cash from Arvind Rs. 3,960 in full settlement.
   j. Withdrew goods for personal use R. 1,000
   k. Withdrew cash from business for personal use Rs. 2,000
   l. Paid telephone charges Rs. 1,000
   m. Cash paid to Amrit in full settlement Rs. 4,900.
   n. Paid for stationery Rs. 200, salaries Rs. 2,000 and rent Rs. 500.
   o. Goods distributed by way of free samples Rs. 1,000.

5. Journalize the following transactions in the books of the firm:
   a. Harry started business with Rs. 50,000
   b. Goods purchased for cash Rs. 50,000
   c. Purchased furniture for Rs. 25,000 in exchange of old furniture Rs. 15,000 and balance paid in cash.
   d. Sold goods for cash Rs. 30,000

e. Goods purchased from Anush Rs. 20,000
f. Sold goods to Ramesh Rs. 15,000
g. Purchased furniture for cash Rs. 5,000
h. Paid cash to Anush Rs. 15,000
i. Bought goods from Raj for cash Rs. 27,000
j. Sold goods to Ashok on credit Rs. 12,000
k. Paid wages to Chandra Rs. 800
l. Interest received Rs. 250
m. Paid rent Rs. 5,000
n. Received cash from Rajesh Rs. 13,000
o. Sold goods to Rajib for cash Rs. 6,000
p. Paid salary to Mohanthy Rs. 2,300

6. Record the following transactions in a three column cash book:

a.	Jan 1st	opening balance: cash Rs. 3,000 and bank Rs. 4,000
b.	Jan 4th	rent paid by cheque Rs. 2,000
c.	Jan 6th	received on account of cash sales Rs. 3,000
d.	Jan 8th	paid to RK brothers by cheque Rs. 2,000 and earned Rs. 200 as discount.
e.	Jan 10th	sold goods Rs. 5,000 to Mr. Prasad on credit.
f.	Jan 12th	cash sales s. 20,000
g.	Jan 20th	purchased goods from Mr. Krishna Rs. 5,000 on credit.
h.	Jan 25th	cash purchases Rs. 15,000
i.	Jan 31st	salaries paid Rs. 1,000
j.	Jan 31st	sold furniture on credit Rs. 5,000 to Mr. rama
k.	Jan 31st	paid into bank Rs. 1,000

7. Enter the following transaction in a three column cash book and balance it:

a.	Mar 1st	cash in hand Rs. 15,000 and at bank Rs. 10,000
b.	Mar 4th	cash sales Rs. 10,000
c.	Mar 5th	paid into bank Rs. 8,000
d.	Mar 6th	received a cheque for Rs. 1,000 from suraj

e. Mar 8th paid to Anurag by cheque Rs. 950 in full settlement of his account of Rs. 1,000

f. Mar 9th withdraw from bank for office use Rs. 5,000

g. Mar 10th cash sales Rs. 10,000

h. Mar 11th received a cheque from john for Rs. 15,000 and deposited into bank for clearance.

i. Mar 12th paid commission to Ram by cheque Rs. 800

j. Mar 15th John's cheque dishonored

k. Mar 18th drew a cheque for Rs. 1,000 for personal use.

8. The following is a trial balance as on 31st Dec, 2014 prepared by an incompetent accountant. You are required to re-write in its correct form.

Capital	2400000	
Stock as on 1st Jan, 2014	850000	
Furniture	260000	
Purchases		895000
Cash at Bank	730000	
Carriage	30000	
Sales		2250000
Buildings	1200000	
Return Inward	190000	
Return Outwards	35000	
Trade Expenses	100000	
Discount received	97000	
Salary	300000	
Office Rent		227000
Total	6192000	3372000

2. Financial Statements

Learning Objectives

- To determine gross profit and net profit of the business during the year.
- To present the true financial position of the business on a given date.
- To make a summary presentation of all the financial transactions.

Introduction

In accounting, financial statements are the means of conveying to management, owners, and to interested outsiders a clear picture of profitability and financial position of the business. While the Trial Balance checks the accuracy of ledger balances, the final account reveals two facts:

1. Whether the business is in profit or loss during the period covered by the Trial Balance. A Trading and Profit & Loss account also known as income statement is prepared for this purpose.
2. What is the financial position (financial position means picture of assets and liabilities) of the business? This is judged by preparing a balance sheet for the business.

Thus, income statement represents the summary of all the expenses and incomes occurred during the financial year whereas balance sheet represents the financial position of the concerned organization at a particular point of time, usually at the end of financial year i.e., 31st March (in India, financial year starts from 1st April to 31st March).

Meaning of Financial Statements

The financial statements of a company reflect a true picture of its financial performances. They depict not only profits and losses, but also assets and liabilities. It is only at the end of all accounting processes that we can generate these statements. These statements basically include the following reports:

1. Balance sheet
2. Profit and Loss statement
3. Statement of cash flow

Users of Financial Statement

There are many users of the financial statements produced by an organization. The following list identifies the more common users and the reasons why they need this information:

- **Company management**. The management team needs to understand the profitability, liquidity, and cash flows of the organization every month, so that it can make operational and financing decisions about the business.
- **Competitors:** Entities competing against a business will attempt to gain access to its financial statements, in order to evaluate its financial condition. The knowledge they gain could alter their competitive strategies.
- **Customers:** When a customer is considering which supplier to select for a major contract, it wants to review their financial statements first, in order to judge the financial ability of a supplier to remain in business long enough to provide the goods or services mandated in the contract.
- **Employees:** A company may elect to provide its financial statements to employees, along with a detailed explanation of what the documents contain. This can be used to increase the level of employee involvement in and understanding of the business.
- **Governments*:*** A government in whose jurisdiction a company is located will request financial statements in order to determine whether the business paid the appropriate amount of taxes.
- **Investment analysts*:*** Outside analysts want to see financial statements in order to decide whether they should recommend the company's securities to their clients.
- **Investors:** Investors will likely require financial statements to be provided, since they are the owners of the business and want to understand the performance of their investment.
- **Lenders*:*** An entity loaning money to an organization will require financial statements in order to estimate the ability of the borrower to pay back all loaned funds and related interest charges.
- **Rating agencies*:*** A credit rating agency will need to review the financial statements in order to give a credit rating to the company as a whole or to its securities.

Format of Trading & Profit & Loss Account

Particulars	Amount	Particulars	Amount
DIRECT EXPENSES:		**DIRECT INCOMES:**	
To Opening Stock	xxx	By Sales A/c	Xxx
To Purchase A/c	xxx	Less: Sales Return A/c (If any)	Xxx
Less: Purchase Returns A/c (If any)	xxx	By Closing Stock A/c	Xxx
To Wages A/c	xxx	By Gross Loss c/d (balancing fig.)	Xxx
To Power, fuel & water A/c	xxx		
To Carriage inward A/c	xxx		
To Import duty A/c	xxx		
To Excise duty A/c	xxx		
To Octroi A/c	xxx		
To Gross Profit c/d(balancing fig.)	xxx		
	xxx		**xxx**
To Gross Loss b/d	xxx	By Gross Profit b/d	xxx
INDIRECT EXPENSES:	xxx	**INDIRECT INCOMES:**	xxx
To Salaries A/c	xxx	By Rent Received A/c	xxx
To Rent A/c	xxx	By Interest Received A/c	xxx
To Printing and stationery A/c	xxx	By Dividend Received A/c	xxx
To Postage and telegram A/c	xxx	By Commission Received A/c	xxx
To Office insurance A/c	xxx	By Bad debts recovered A/c	xxx
To Lighting and heating A/c	xxx	By Discount Received A/c	xxx
To Audit fees A/c	xxx	By Profit on sale of property A/c	xxx
To Legal Charges A/c	xxx	By Profit on sale of investment a/c	xxx
To Repairs A/c	xxx	By Interest on Drawing A/c	xxx
To Depreciation A/c	xxx	By Net Loss (balancing figure)	(xxx)
To Rent of warehouse A/c	xxx		
To Packing charges A/c	xxx		
To Advertisement A/c	xxx		
To Carriage outwards A/c	xxx		
To Bad debts A/c	xxx		
To Commission paid A/c	xxx		
To Travelling expenses A/c	xxx		
To Interest on loan A/c,	xxx		
To Discount allowed A/c,	xxx		
To Loss on sale of property A/c,	xxx		
To Loss on sale of investment A/c	xxx		
To Net Profit c/d (balancing figure)	xxx		
Total	xxx	Total	xxx

Format of Balance Sheet

LIABILITIES	Amount	ASSETS	Amount
Capital:	xxx	**Fixed Assets (Less Depreciation):**	
		Land & Building A/c	xxx
Reserves and Surplus	xxx	Plant & Machinery A/c	xxx
		Furniture & Fixture A/c	xxx
Current Liabilities		Typewriter & Computers A/c	xxx
Sundry Creditors A/c	xxx	Vehicles A/c	xxx
Bills Payable A/c	xxx	Goodwill A/c	xxx
Bank overdraft(BoD) A/c	xxx	Patents A/c	xxx
Outstanding Expenses A/c	xxx	Trade Marks A/c	xxx
Income Received Advance A/c	xxx	Copy Rights A/c	xxx
Long term Liabilities:		**Long term Investments:**	
Long term Loans	xxx	Investment in shares, debentures,	xxx
Debentures	xxx	government etc.	xxx
		Current Assets:	
		Cash A/c	xxx
		Bank A/c	xxx
		Short term investment A/c	xxx
		Sundry Debtors less Bad Debts A/c	xxx
		Bills Receivable A/c	xxx
		Stock A/c	xxx
		Prepaid Expenses A/c	xxx
		Outstanding Incomes A/c	xxx
	xxx		xxx

1. Prepare a Trading Account of Mr. Mahesh Kumar for the year ending 31st March from the following particulars:

Particulars	Amount
Stock of goods on 1-4-11	3,50,000
Stock of goods on 1-4.12	4,00,000
Purchases	4,50,000
Sales	6,00,000
Return outwards	70,000
Return inwards	90,000
Carriage inwards	10,000
Wages	5,000

Solution is as follows:

Trading Account for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Opening Stock	3,50,000	By Sales	
To Purchases 4,50,000		6,00,000	5,10,000
Less: returns 70,000	3,80,000	Less: returns	4,00,000
To carriage inwards	10,000	90,000	
To Wages	5,000	By Closing Stock	
To Gross profit (balancing figure)	**1,65,000**		
Total	9,10,000	Total	9,10,000

2. Prepare a Trading account of Mr. X for the year ending 31st March, 2012 from the following particulars:

Particulars	Amount
Purchases of materials	2,50,000
Carriage on purchases	6,000
Wages	70,000
Stock of goods on 1-4-11	3,60,000
Stock of goods on 1-4-12	3,80,000
Sales	6,50,000
Sales returns	80,000
Purchase returns	30,000
Duty and clearing charges	70,000
Factory rent	30,000

Factory salaries	20,000

Solution is as follows:

Trading Account for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Opening Stock To Purchases 2,50,000 Less: returns 30,000 To carriage on purchases To Wages To Duty & clearing charges To Factory rent To Factory salaries To Gross profit (balancing figure)	3,60,000 2,20,000 6,000 70,000 70,000 30,000 20,000 **1,74,000**	By Sales 6,50,000 Less: returns 80,000 By Closing Stock	 5,70,000 3,80,000
Total	9,50,000	Total	9,50,000

3. Prepare trading account for the year ending 31st December, 2011

Particulars	Amount
Stock on 1.1.12	1,20,000
Purchases	2,50,000
Sales	3,00,000
Carriage inwards	10,000
Return inwards	20,000
Return outwards	30,000
Wages	8,000
Import duty	12,000
Stock on 1.1.11	1,70,000
Motive power	3,000

Solution is as follows:

Trading Account for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Opening Stock	1,70,000	By Sales 3,00,000	
To Purchases 2,50,000		Less: returns 20,000	2,80,000
Less: returns 30,000	2,20,000	By Closing Stock	1,20,000
To Carriage inwards	10,000	By Gross Loss	**23,000**
To Wages	8,000	(balancing figure)	
To import duty	12,000		
To Motive Power	3,000		
To Gross Profit			
	4,23,000		4,23,000

4. Prepare profit and loss account from the following particulars relating to the year ending:

Particulars	Amount
Gross profit	1,40,000
Salaries	28,000
Administrative expenses	10,000
Selling expenses	20,000
Maintenance expenses	5,000
Commission received	7,000
sundry office expenses	10,000

Solution is as follows:

Profit & Loss for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Salaries	28,000	By Gross Profit	1,40,000
To Administrative expenses	10,000	By Commission received	7,000
To Selling expenses	20,000		
To Maintenance expenses	5,000		
To Sundry office expenses	10,000		
To Net profit (balancing figure)	**74,000**		
	1,47,000		1,47,000

5. Prepare profit and loss account from the following particulars

Particulars	Amount
Office salaries	40,000
Postage and telegrams	20,000
Office rent	7,000
Sundry office expenses	10,000
Selling expenses	8,000
Gross profit	2,00,000
Advertisement	12,000
Commission paid	9,000
Commission received	8,000
Prepaid rent	1,000
Outstanding salaries	15,000

Solution is as follows:

Profit & Loss for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To office salaries 40,000		By Gross Profit	2,00,000
Add: o/s salaries 15,000	55,000	By Commission received	8,000
To postage & telegrams	20,000		
To office rent 7,000			
Less: prepaid rent 1,000	6,000		
To sundry office expenses	10,000		
To selling expenses	8,000		
To advertisement	12,000		
To commission paid	9,000		
To Net profit (balancing figure)	**1,18,000**		
	2,08,000		2,08,000

6. Prepare trading and profit account for the year ended 31st March, 2011:

Particulars	Amount	Particulars	Amount
Bad debts	40,000	Depreciation	4,600
Salaries	1,000	Bad debts provision	3,000
Insurance	8,000	Outstanding salaries	1,000
Prepaid insurance	1,300	Debtors	50,000
Purchases	1,50,000	Creditors	40,000
Furniture	5,400	Closing stock	22,400
Machinery	36,000	sales	2,10,000
		opening stock	15,000

Solution is as follows:

Trading and Profit & Loss for the year ending 31st March				
Particulars		**Amount**	**Particulars**	**Amount**
To Opening stock		**15,000**	By sales	2,10,000
To purchases		**1,50,000**	By closing stock	22,400
To Gross profit (balancing figure)		**67,400**		
		2,32,400		2,32,400
To Salaries	1,000		By gross profit	67,400
Add: o/s salaries	1,000	2,000		
To insurance	8,000			
Less: prepaid	1,300	6,700		
To Depreciation		4,600		
To Bad debts	40,000			
Less: provision	3,000	37,000		
To Net profit (balancing figure)		**17,100**		
		67,400		67,400

7. From the following trial balance of M/s Ranga & sons Co., prepare trading and profit and loss account for year ending 31st March 2011:

Particulars	Debit	Credit
Capital		62,000
Opening stock	23,000	
Sales and purchases	32,000	53,700
Returns	2,000	1,500
Wages	1,800	
Land and buildings	52,000	
Freight and carriage	2,700	
Trade expenses	1,300	
Advertisement	1,500	
Interest		800
Creditors and debtors	28,000	32,000
Cash in hand	1,200	
Salaries	2,500	
Office expenses	2,000	

Solution is as follows:

Trading and Profit & Loss for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Opening stock	**23,000**	By sales 53,700	
To purchases: 32,000		Less: returns 2,000	51,700
Less: returns: 1,500	**30,500**	By Gross loss	6,300
To wages	**1,800**	(balancing figure)	
To freight and carriage	**2,700**		
	58,000		58,000
To Gross loss	6,300	By Interest	800
To Salaries	2,500	By Net loss	12,800
To Trade expenses	1,300	(balancing figure)	
To advertisement	1,500		
To Office salaries	2,000		
	13,600		13,600

8. From the following trial balance of M/s Sheema Enterprises prepare the final accounts for the year ended 31st March, 2010 and the balance sheet as on that date:

Particulars	Debit	Credit
Land and buildings	50,000	
Purchas	1,10,000	
Stock	40,000	
Returns	1,500	2,500
Wages	10,000	
Salaries	9,000	
Office expenses	2,400	
Carriage inwards	1,200	
Carriage outwards	2,000	
Discounts	750	1,200
Bad debts	1,200	
Sales		2,05,000
Capital account		1,30,000
Insurance	1,500	
Commission		1,500
Plant and machinery	50,000	
Furniture and fixtures	10,000	
Bills receivable & Bills	20,000	2,350
payable	40,000	
Sundry debtors		25,000
Sundry creditors	1,500	
Cash in hand	4,500	
Cash at bank	12,000	
Office equipment		
Total	3,67,550	3,67,550

The following adjustments are required:

- Closing stock amounted to Rs. 60,000
- Outstanding liabilities: wages Rs. 2,000, Rent Rs. 3,000
- Depreciate land and buildings at 5%, plant and machinery at 10%, office equipment and furniture and fixtures at 10%.
- Raise a bad and doubtful debts reserve at 5% on debtors.
- Insurance premium prepaid Rs. 200
- Provide interest on capital at 5%.

Solution is as follows:

Trading and Profit & Loss for the year ending 31st March			
Particulars	**Amount**	**Particulars**	**Amount**
To Opening stock	40,000	By sales: 2,05,000	
To purchases: 1,10,000		Less: returns 1,500	2,03,500
Less returns: 2,500	1,07,500	By closing stock	60,000
To Wages: 10,000			
Add: o/s 2,000	12,000		
To carriage inwards	1,200		
To Gross profit (balancing figure)	1,02,800		
	2,63,500		2,63,500
To salaries	9,000	By gross profit	1,02,800
To office expenses	2,400	By discount	1,200
To carriage outwards	2,000	By commission	1,500
To discounts	750		
To bad debts 1,200			
Add: New reserve 2,000	3,200		
To insurance: 1,500			
Less: prepaid 200	1,300		
To outstanding rent	3,000		
To depreciation:			
Land & buildings 2,500			
Plant & machinery 5,000			
Office equipment 1,200			
Furniture & fixtures 1,000	9,700		
To interest on capital	6,500		
To net profit	67,650		
	1,05,500		1,05,500

Balance Sheet As on 31st March, 2010

Liabilities	Amount	Amount	Assets	Amount	Amount
Capital	1,30,000		Land & buildings	50,000	
Add: net profit	67,650		Less: dept	2,500	47,500
Add: int on capital	6,500	2,04,150			
			Plant & machinery	50,000	
Sundry creditors		25,000	Less: dept	5,000	45,000
Bills payable		2,350			
Outstanding wages		2,000	Furniture & fixtures	10,000	
Outstanding rent		3,000	Less: dept	1,000	9,000
			Office equipment	12,000	
			Less: dept	1,200	10,800
			Debtors	40,000	
			Less: new reserve	2,000	38,000
			Bills receivable		20,000
			Cash in hand		1,500
			Cash at bank		4,500
			Closing stock		60,000
			Prepaid insurance		200
		2,36,500			2,36,500

9. From the following trial balance and additional information prepare, Trading and Profit/Loss account for the year ending 31st March 2011 and Balance Sheet as on that date:

Particulars	Debit	Credit
Capital/drawings	2,97,300	1,50,000
Plant and machinery	50,000	
Sales/purchases	15,37,000	19,91,500
Returns	4,000	5,000
Wages and salaries	5,000	
Creditors and debtors	2,80,000	1,96,000
Provision for doubtful debts		10,000
Bad debts	3,000	
Discount	1,800	1,000
Loose tools	5,000	
10% Loan to Amir	2,00,000	
12% loan from Ajay		2,00,000
Interest on 12% loan	10,000	
Interest on 10% loan		12,000
Dividend		1,000
Investments	10,000	
Income tax	5,000	

Salesman's commission	87,500	
Sundry expenses	65,000	
Sales tax	5,900	
Total	25,66,500	25,66,500

Additional information:

I. Closing stock at market price as at 31st March 2011 was Rs. 61,500. However its cost was Rs. 80,000

II. A machine costing Rs. 20,000 was purchased on 1st July 2010. Wages Rs. 1,000 for its erection has been debited to wages account. Provide depreciation on plant and machinery at 10% p.a.

III. Debtors include an amount of Rs. 5,000 due from a customer who has become insolvent. Maintain the provision for doubtful debts at 10% and for discount @ 2% on debtors. Also create a reserve for discount on creditors at 2%.

IV. Dividend accrued on investments Rs. 500.

V. Loose tools were valued at Rs. 4,000.

VI. Fire occurred on 23rd march 2011 and good costing Rs. 10,000 were destroyed. The insurance company accepted the claim for 60% only and paid the claim money on 10th of April 2011

Solution is as follows:

Trading and Profit & Loss Account for the year ending 31st March, 2011

Particulars	Amount	Amount	Particulars	Amount	Amount
To Purchases Less: returns To wages and salaries Less: erection charges To gross profit	15,37,000 5,000 5,000 1,000	 15,32,000 4,000 5,23,000	By sales Less: returns By closing stock By goods lost by fire	19,91,500 4,000	 19,87,500 61,500 10,000
Total		20,59,000	Total		20,59,000
To Bad debts Add: new bad debts Add: new provision Less: old provision To discount on debtor To discount To Interest on loan Add: O/s interest	3,000 5,000 27,500 10,000 10,000 14,000	 25,500 4,950 1,800 24,000 87,500	By gross profit By discount By interest on loan Add: O/s income By dividend Add: accrued income By discount on creditors	 12,000 8,000 1,000 500	5,23,000 1,000 20,000 1,500 3,920

To salesman comm To sundry expenses To sales tax To erection charges To depreciation: Machinery Loose tools To net loss of fire To net profit	 4,500 1,000	65,000 5,900 1,000 5,500 4,000 3,24,270			
		5,49,420			5,49,420

Balance Sheet – As on 31st March, 2011

Liabilities	Amount	Amount	Assets	Amount	Amount
Capital Add: net profits Less: drawings Less: income tax Creditors Less: discount on creditors 12% loan to Ajay O/s interest on loan	1,50,000 3,24,270 2,97,300 5,000 1,96,000 3,920	 1,71,970 1,92,080 2,00,000 14,000	Plant & machinery Less: depreciation Loose tools Less: depreciation Debtors Less: New Bad debts Less: new provision Less: discount on debtor 10% loan to Ajay Investment Closing stock O/s interest on loan Accrued dividend Insurance claim due	50,000 4,500 5,000 1,000 2,80,000 5,000 27,500 4,950	 45,500 4,000 2,42,550 2,00,000 10,000 61,500 8,000 500 6,000
		5,78,050			5,78,050

Additional problems for practice

1. Prepare trading, profit/loss account, profit/loss appropriation account and balance sheet from the following information:

Particulars	Debit	Credit
Share capital (Rs. 100 each)		10,00,000
Calls on arrears	5,000	
10% debentures		4,00,000
Debtors and creditors	1,00,000	50,000
Bills receivable and Bills payable	2,50,000	1,00,000
Purchases and sales	45,00,000	50,00,000
Stock (1.4.2005)	2,00,000	
Bank loan at 6%		1,80,000
Interest on bank loan	6,000	
Reserve fund		20,000
Preliminary expenses	10,000	
Plant and machinery	4,50,000	
Furniture	2,00,000	
Equipments	1,20,000	
Investments	2,00,000	
Goodwill	2,00,000	
Freehold building	30,000	
Cash in hand	80,000	
Cash at bank	1,60,000	
Manufacturing expenses	50,000	
Manufacturing wages	30,000	
Rent and taxes	4,000	
Salaries	50,000	
Machinery repairs	2,000	
Discount	500	
Freight inward	500	
Insurance	2,000	

Selling and distribution expenses	1,00,000	
Total	67,50,000	67,50,000

Adjustments:

- Closing stock is valued at Rs. 1,50,000
- Insurance is prepaid to the extent of Rs. 500
- Write off 1/4th of the preliminary expenses
- Outstanding expenses: salaries Rs. 1,000 and interest lo bank loan for 6 months
- Provide for debenture interest and investment were valued at Rs. 2,10,000.
- Provide for new bad debts for Rs. 10,000 and create new provision of Rs. 5,000
- Depreciate plant and machinery by 15% and furniture and equipment by 10%.
- Directors proposed a dividend of 5% on capital
- Transfer to reserve fund Rs. 10,000.
- Make provision for income tax at 30%.

2. The following is the trial balance of Lakshmi Ltd as an 31.3.2010

Particulars	Debit	Credit
Stock on 1.4.2009	75,000	
Sales and purchases	2,45,000	3,50,000
Wages	50,000	
Discount		5,000
Furniture	17,000	
Salaries	7,500	
Rent	4,950	
Sundry expenses	7,050	
P & L appropriation a/c		15,000
Dividend paid	9,000	
Share capital		1,00,000
Debtors and creditors	37,500	17,500
Plant and machinery	29,000	
Cash	16,200	

General reserve		15,500
Patents and trade marks	4,800	
Total	5,03,000	5,03,000

Prepare trading a/c, profit and loss a/c., profit & loss appropriation a/c for the year ended 30th June, 2010 and balance sheet as at that date. Take into consideration the following adjustments:

- Stock on 31st March, was valued at Rs. 82,000
- Depreciation on fixed assets at 10%.
- Make a provision for income tax at 50%
- Corporate dividend tax is 10%
- Write-off patents and trademarks by 1/10th every year.

3. Trial Balance of Papu Ltd as on 31.12.2010.

Particulars	Debit	Credit
Stock on 1.1.2010	32.600	
Sales and purchases	2,48,000	3,76,000
Wages	26,400	
Salaries	24,800	
Rent	9,600	
Interest		4,000
Commission	1,200	
P & L appropriation A/c		44,800
Vehicles	20,000	
Reserve fund		36,000
Cash	6,800	
Creditors and debtors	36,000	34,800
BR and BP	16,400	7,600
Capital (Rs. 100 each)		2,00,000
Bad debts	1,800	
Preliminary expenses	12,000	
Investments	34,200	

Discount	6,400	9,200
6% debentures		80,000
Debenture interest	4,800	
Goodwill	24,000	
Furniture	18,800	
Plant & machinery	96,000	
Land & Buildings	1,74,000	
Returns	9,200	10,000
Transfer fees		600
Total	8,03,000	8,03,000

Adjustments:

- Closing stock Rs. 65,000
- Salaries outstanding Rs. 1,200
- Depreciate furniture 6% and plant & machinery by 5%.
- Reserve for doubtful debts by 5%
- Transfer Rs. 22,000 to reserve fund.
- Goods of Rs. 24,000 were destroyed by Fire & Insurance Co. agreed to pay Rs. 16,400.
- Write off 1/5th of preliminary expenses.
- Proposed dividend Rs. 20,000
- Provision for taxation Rs. 2,000

3. Financial Analysis

Learning Objectives:

- Analyze the balance sheet of companies and assess their position.
- Adjust and consistently analyze the income statement of companies and assess their performance.
- Analyze the cash flow statement of companies and identify the cash flow drivers

Introduction

The analysis of financial statement is an important aid to financial analysis. The focus of financial analysis is on key figures in the financial statements and the relationship between them. Financial statement analysis is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance.

"Financial statement analysis is largely a study of the relationships among the various financial factors in a business as disclosed by a single set of statements and a study of the trends of the these factors as shown in a series of statements."

John N. Myers

Financial statement analysis converts the mass of data into useful information which is always in scarce supply. It pinpoints the strengths and weaknesses of a business undertaking by use of various techniques such as comparative statements, common size statements, ratio analysis, cash flow statements and fund flow statements. Thus, financial statement analysis helps in evaluating a business performance according to some specific objectives.

TYPES OF FINANCIAL STATEMENT ANALYSIS

1. **Internal and External Analysis**

   When analysis is done on behalf of the management who has access to the internal accounting records of the firm, it is called internal analysis.

   External analysis is done by outsiders like share holders, creditors, investors and potential investors, government agencies who do not have access to the detailed internal records of the firm.

2. **Horizontal and Vertical Analysis**

   Horizontal analysis is that which covers financial data of more than one year. It may be upto 5 or 10 years.

   Vertical analysis is also known as static analysis which covers a period of one year only and analysis is made on the basis of one set of financial statements.

PRINCIPAL TOOLS OF ANALYSIS

In the analysis of financial statements, the analyst has available a number of tools from which he has to choose best suited for his specific purpose. The following are the principal tools of analysis of financial statements.

1. Comparative Financial statements
2. Common-size Financial statements
3. Trend percentages
4. Fund flow statement
5. Cash flow statement
6. Ratio Analysis.

1. Comparative Financial Statements

Comparative financial statements are one of the very important tools of analysis of financial statements. These statements are designed to provide time perspective to the consideration of various elements of the financial position embodied in such statements.

Comparison of financial statements means financial statements of the same company for earlier years. Comparative statements take the form of comparative balance sheets and comparative profit and loss accounts.

i. **Comparative income statement:**

A comparative income statement is prepared to show the net profit or net loss for a number of years in comparative form. It shows the absolute figures for two or more periods, the absolute change from one period to another and if desired the change in terms of percentages.

ii. **Comparative balance sheet:**

Comparative balance sheet as on two or more different dates can be used for comparing assets and liabilities and finding out any increase or decrease in those items.

2. Common-size Financial Statements

Common-size statement is a type of comparative financial statement. It is a financial statement presents by representing each item as a percentage to the total amount of which it is a part. It expresses assets and liabilities as percent of total assets and expenses and profit as percent of sales. Common-size statements prepared for a firm over the years would highlight the relative changes in each group of expenses, assets and liabilities. Common-size financial statement includes two type of statement. They are,

i. **Common-size income statement**

Income statement summarizes the revenues and expenses of an accounting period. Common-size income statement can be prepared by showing net sales as 100 percent and each component of expenses and profits as a percentage of net sales.

ii. Common-size balance sheet

A common-size balance sheet is constructed by showing each item of asset as a percentage of the total assets and each item of liability and owner equity is shown as a percentage of total liability and owner's equity.

3. Trend Percentages

Trend percentage is a technique of studying financial statements of a company over a number of years. This is also called as time series analysis. Under this method, a representative year is selected as the base year and the values of items in the base year are assumed to be 100. Then the relationship of each item in the subsequent years is expressed as a percentage of the same item in the base year. Any year may be taken as a base year but generally the starting or initial year is taken as the base year.

4. Fund flow statement

Fund flow statement is an attempt to report the flow of funds between various assets and liabilities and owner's capital during an accounting period. This is also known as "Statement of Sources and Application of Funds" or "Where Got, Where Gone Statement." This statement is prepared to indicate the increases and utilization of resources of a business during an accounting period.

5. Cash flow statement

A cash flow statement is a statement of changes in cash position between the beginning and end of the period. This summarizes the sources from which cash payments are made during a particular period of time. This statement is prepared as per Accounting Standard- 3

FORMAT OF COMPARATIVE INCOME STATEMENT

Sl.No	Particulars	Previous year	Current year	Increase or Decrease	% change
A	Sales Less: Cost of goods sold	XXX XXX	XXX XXX	XXX XXX	XX XX
B	**Gross profit**	**XXX**	**XXX**	**XXX**	**XX**
C	**Less: Operating expenses** • Office expense • Selling expenses • Finance expenses	 XX XX XX	 XX XX XX	 XX XX XX	 XX XX XX
	Total operating expenses	**XX**	**XX**	**XX**	**XX**
D (B-C)	**Profit after Operating Exp**	**XXX**	**XXX**	**XXX**	**XXX**
E	**Add: Operating Income** • Rent received • Commission received • Interest received	 XX XX XX	 XX XX XX	 XX XX XX	 XX XX XX
	Total Operating income	**XX**	**XX**	**XX**	**XX**
F (D+E)	**Profit after Operating Income**	**XXX**	**XXX**	**XXX**	**XXX**
G	**Less: Non operating Exp** • Loss of sale of asset • Dividend paid • Debenture interest paid • Written off	 XX XX XX XX	 XX XX XX XX	 XX XX XX XX	 XX XX XX XX
	Total Non operating exp	**XX**	**XX**	**XX**	**XX**
H (F-G)	**Profit after NOE**	**XXX**	**XXX**	**XXX**	**XXX**
I	**Add: Non operating income** • Profit on sale of asset • Dividend received	 XX XX	 XX XX	 XX XX	 XX XX
	Total Non operating income	**XX**	**XX**	**XX**	**XX**
J (H+I)	**Profit before tax** Less: tax	**XXX** XX	**XXX** XX	**XXX** XX	**XXX** XX
L	**Profit after tax**	**XXX**	**XXX**	**XXX**	**XXX**

FORMAT FOR COMPARATIVE BALANCE SHEET

Sl.No	Assets	Previous year	Current year	Increase or Decrease	% change
	Fixed Assets:				
	• Land and buildings	XX	XX	XX	XX
	• Plant and machinery	XX	XX	XX	XX
	• Furniture and fixtures	XX	XX	XX	XX
	• Good will	XX	XX	XX	XX
	• Vehicles	XX	XX	XX	XX
A	**Total Fixed Assets**	**XXX**	**XXX**	**XXX**	**XXX**
	Current asset:				
	• Debtors	XX	XX	XX	XX
	• Stock	XX	XX	XX	XX
	• Cash and bank balance	XX	XX	XX	XX
	• Bills receivables	XX	XX	XX	XX
	• Other current assets	XX	XX	XX	XX
B	**Total Current Assets**	**XXX**	**XXX**	**XXX**	**XXX**
C (A+B)	**Total Assets**	**XXX**	**XXX**	**XXX**	**XXX**

Sl.No	Liabilities	Previous year	Current year	Increase or Decrease	% change
	Equity:				
	• Equity share capital	XX	XX	XX	XX
	• Reserves and surplus	XX	XX	XX	XX
	• Preference share capital	XX	XX	XX	XX
A	**Total Equity**	**XXX**	**XXX**	**XXX**	**XXX**
	Long Term Debt:				
	• Debentures	XX	XX	XX	XX
	• Long term loans	XX	XX	XX	XX
B	**Total Long Term Loan**	**XXX**	**XXX**	**XXX**	**XXX**
	Current Liabilities:				
	• Creditors	XX	XX	XX	XX
	• Bills payable	XX	XX	XX	XX
	• Bank overdraft	XX	XX	XX	XX
	• Outstanding expenses	XX	XX	XX	XX
	• Prepaid income	XX	XX	XX	XX
	• Provisions	XX	XX	XX	XX
C	**Total Current Liabilities**	**XXX**	**XXX**	**XXX**	**XXX**
D (A+B+C)	**Total Liabilities**	**XXX**	**XXX**	**XXX**	**XXX**

1) Following is the balance sheet of Global exports as on 31.3.3011 and 31.3 2012. You are required to prepare the comparative balance sheet for the following balance sheets:

Liabilities	**31.3.2011**	**31.3.2012**
Share capital	12,00,000	10,00,000
Reserves & surplus	20,000	25,000
Secured loans	45,000	30,000
Unsecured loans	2,00,000	2,50,000
Current liabilities	1,25,000	1,50,000
Total	15,90,000	14,55,000
Assets	**31.3.2011**	**31.3.2012**
Buildings	3,00,000	2,55,000
Machinery	4,90,000	3,25,000
Stock	3,00,000	3,75,000
Debtors	2,50,000	3,00,000
Cash	2,50,000	2,00,000
Total	15,90,000	14,55,000

Solution is as follows:

Sl.No	Liabilities	2011	2012	Increase or Decrease	% Change
	Equity: • Equity share capital • Reserves and surplus	 12,00,000 20,000	 10,00,000 25,000	 (2,00,000) 5,000	 16.67% 25%
A	**Total Equity**	**12,20,000**	**10,25,000**	**(1,95,000)**	**15.98%**
	Long Term Debt: • Secured loans • Unsecured loans	 45,000 2,00,000	 30,000 2,50,000	 (15,000) 50,000	 33.33% 25%
B	**Total Long Term Loan**	**2,45,000**	**2,80,000**	**35,000**	**14.29%**
	Current Liabilities	1,25,000	1,50,000	25,000	20%
C	**Total Current Liabilities**	**1,25,000**	**1,50,000**	**25,000**	**20%**
D (A+B+C)	**Total Liabilities**	**15,90,000**	**14,55,000**	**(1,35,000)**	**-8.49%**

Sl.No	Assets	Previous year	Current year	Increase or Decrease	% Change
	Fixed Assets:				
	Land and buildings	3,00,000	2,55,000	(45,000)	15%
	Plant and machinery	4,90,000	3,25,000	(1,65,000)	33.67%
A	**Total Fixed Assets**	**7,90,000**	**5,80,000**	**(2,10,000)**	**26.58%**
	Current asset:				
	Stock	3,00,000	3,75,000	75,000	25%
	Debtors	2,50,000	3,00,000	(50,000)	-20%
	Cash and bank balance	2,50,000	2,00,000	50,000	25%
B	**Total Current Assets**	**8,00,000**	**8,75,000**	**75,000**	**9.37%**
C (A+B)	**Total Assets**	**15,90,000**	**14,55,000**	**(1,35,000)**	**-8.49%**

2) The following is the balance sheet of ABC Ltd., for two periods viz., 2011 & 2012.

Liabilities	31.3.2011	31.3.2012
Share capital	6,00,000	7,00,000
Reserves and surplus	1,50,000	2,70,000
Debentures	2,00,000	1,50,000
Mortgage loan	50,000	1,00,000
Bills payable	20,000	15,000
Sundry creditors	60,000	50,000
Other current liabilities	15,000	10,000
Total	10,95,000	12,95,000
Assets	31.3.11	31.3.12
Buildings	5,00.000	5,20,000
Machinery	2,50,000	3,50,000
Furniture	80,000	50,000

Bills receivable	65,000	50,000
Debtors	80,000	1,00,000
Stock	1,00,000	1,50,000
Prepaid exp	5,000	10,000
Cash balances	15,000	65,000
Total	10,95,000	12,95,000

Solution is as follows:

Sl.No	Liabilities	2011	2012	Increase or Decrease	% Change
	Equity:				
	• Equity share capital	6,00,000	7,00,000	1,00,000	16.67%
	• Reserves and surplus	1,50,000	2,70,000	1,20,000	80.00%
A	**Total Equity**	**7,50,000**	**9,70,000**	**2,20,000**	**29.33%**
	Long Term Debt:				
	• Debentures	2,00,000	1,50,000	(50,000)	-25.00%
	• Mortgage loan	50,000	1,00,000	50,000	25.00%
B	**Total Long Term Loan**	**2,50,000**	**2,50,000**	**--**	**---**
	Current Liabilities:				
	• Bills payable	20,000	15,000	(5,000)	-25.00%
	• Sundry creditors	60,000	50,000	(10,000)	-13.33%
	• Other current liabilities	15,000	10,000	(5,000)	-33.33%
C	**Total Current Liabilities**	**95,000**	**75,000**	**(20,000)**	**21.05%**
D (A+B+C)	**Total Liabilities**	**10,95,000**	**12,95,000**	**(2,00,000)**	**18.27%**

Sl.No	Assets	Previous year	Current year	Increase or Decrease	% Change
	Fixed Assets:				
	Land and buildings	5,00,000	5,20,000	20,000	4.00%
	Plant and machinery	2,50,000	3,50,000	1,00,000	40.00%
	Furniture	80,000	50,000	(30,000)	-37.50%
A	**Total Fixed Assets**	**8,30,000**	**9,20,000**	**90,000**	**10.84%**
	Current asset:				
	Bills receivable	65,000	50,000	(15,000)	-23.08%
	Debtors	80,000	1,00,000	20,000	25.00%
	Stock	1,00,000	1,50,000	50,000	50.00%
	Prepaid expenses	5,000	10,000	5,000	50.00%
	Cash balances	15,000	65,000	50,000	333.33%
B	**Total Current Assets**	**2,65,000**	**3,75,000**	**1,10,000**	**41.51%**
C (A+B)	**Total Assets**	**10,95,000**	**12,95,000**	**2,00,000**	**18.26%**

3) Following is the detail of M/S ltd as on 2003 and 2004. Prepare common size income statement for the year ending 2003 and 2004 and comment:

Particulars	2003	2004
Sales	3,50,000	4,50,000
Cost of goods sold	2,75,000	4,00,000
Operating expenses	11,000	22,500
Office expenses	4,500	15,000
Selling expenses	2,500	3,000
Distribution expenses	1,250	1,000
Financial expenses	10,000	12,500

Tax rate is 35%

Solution is as follows:

Sl.No	Particulars	2003	%	2004	%
A	Sales	3,50,000	100.00	4,50,000	100.00
	Less: Cost of goods sold	2,75,000	78.57	4,00,000	88.88
B	**Gross profit**	**75,000**	**21.43**	**50,000**	**11.12**
C	**Less: Operating expenses**				
	• Operating expenses	11,000	3.14	22,500	5.00
	• Office expenses	4,500	1.29	15,000	3.33
	• Selling expenses	2,500	0.71	3,000	0.67
	• Distribution expenses	1,250	0.36	1,000	0.22
	• Financial expenses	10,000	2.86	12,500	2.78
	Total operating expenses	**29,250**	**8.36**	**54,000**	**12.00**
D (B-C)	**Profit after Operating Exp**	**45,750**	**13.07**	**(4,000)**	**(0.88)**
H (F+G)	**Profit before tax**	45,750	13.07	(4,000)	(0.88)
	Less: tax	16,013	4.58	----	----
I	**Profit after tax**	**29,737**	**8.49**	**----**	**----**

4) Following is the details of Hindalco Ltd, prepare common size balance sheet of the company and year ending 2011 and 2012 and comment on the financial position of the concern:

Particulars	2011	2012		2011	2012
Liabilities			***Fixed Assets***		
Share capital	15,00,000	18,00,000	Buildings	14,50,000	17,50,000
Reserves & surplus	2,25,000	2,00,000	Furniture	2,00,000	4,40,000
8% Debentures	45,000	30,000	***Current***		
Long term loan	2,00,000	2,50,000	***Assets***	1,75,000	85,000
Creditors	1,25,000	1,50,000	Stock	1,45,000	1,00,000
Bills payable	45,000	50,000	Debtors	1,82,500	1,20,000
Bank overdraft	12,500	15,000	Cash		
Total	21,52,500	24,95,000	Total	21,52,500	24,95,000

Solution is as follows:

Sl.No	Liabilities	2011	%	2012	%
	Equity:				
	• Equity share capital	15,00,000	69.69	18,00,000	72.14
	• Reserves and surplus	2,25,000	10.45	2,00,000	8.02
A	**Total Equity**	**17,25,000**	**80.14**	**20,00,000**	**80.16**
	Long Term Debt:				
	• 8% Debentures	45,000	2.09	30,000	1.20
	• Long term loan	2,00,000	9.29	2,50,000	10.02
B	**Total Long Term Loan**	**2,45,000**	**11.38**	**2,80,000**	**11.22**
	Current Liabilities:				
	• Bank overdraft	12,500	0.58	15,000	0.60
	• Sundry creditors	1,25,000	5.81	1,50,000	6.01
	• Bills payable	45,000	2.09	50,000	2.01
C	**Total Current Liabilities**	**1,82,500**	**8.48**	**2,15,000**	**8.62**
D (A+B+C)	**Total Liabilities**	**21,52,500**	**100.00**	**24,95,000**	**100.00**

Sl.No	Assets	2010	%	2011	%
	Fixed Assets:				
	Buildings	14,50,000	67.36	17,50,000	70.14
	Furniture	2,00,000	9.29	4,40,000	17.64
A	**Total Fixed Assets**	**16,50,000**	**76.65**	**21,90,000**	**87.78**
	Current asset:				
	Stock	1,75,000	8.13	85,000	3.41
	Debtors	1,45,000	6.74	1,00,000	4.01
	Cash balances	1,82,500	8.48	1,20,000	4.80
B	**Total Current Assets**	**5,02,500**	**23.35**	**3,05,000**	**12.23**
C (A+B)	**Total Assets**	**21,52,500**	**100.00**	**24,95,000**	**100.00**

5. Following is the details of Dev Ltd as on 2009, 2010 and 2011. You are required to prepare the financial trend analysis and give your conclusions:

Particulars	2009	2010	2011
Liabilities			
Share capital	85,000	1,15,000	1,50,000
Reserves & surplus	50,000	25,000	75,000
8% Debentures	25,000	30,000	45,000
Long term borrowings	5,000	6,000	8,000
Creditors	10,000	15,000	10,000
Bills payable	25,000	15,000	5,000
Bank overdraft	5,000	2,500	2,500
Total	2,05,000	2,08,000	2,95,500
Fixed Assets			
Buildings	1,00,000	1,30,000	1,50,000
Furniture	35,000	20,000	35,000
Current Assets			
Stock	25,000	18,500	75,000
Debtors	10,000	15,000	25,000
Cash	35,000	25,000	10,500
Total	2,05,000	2,08,500	2,95,500

Solution is as follows:

Particulars	2009	%	2010	%	2011	%
Equity:						
Share capital	85,000	100.00	1,15,000	135.29	1,50,000	176.47
Reserves & surplus	50,000	100.00	25,000	50.00	75,000	150.00
Total	**1,35,000**	**100.00**	**1,40,000**	**103.70**	**2,25,000**	**166.67**
Long term loans:						
8% Debentures	25,000	100.00	30,000	120.00	45,000	180.00
Long term borrowings	5,000	100.00	6,000	120.00	8,000	160.00
Total long term loans	**30,000**	**100.00**	**36,000**	**120.00**	**53,000**	**176.67**
Current liabilities:						
Creditors	10,000	100.00	15,000	150.00	10,000	100.00
Bills payable	25,000	100.00	15,000	60.00	5,000	20.00
Bank overdraft	5,000	100.00	2,500	50.00	2,500	50.00
Total current liabilities	**40,000**	**100.00**	**32,500**	**81.25**	**17,500**	**43.75**
Total liabilities	**2,05,000**	**100.00**	**2,08,500**	**101.71**	**2,95,500**	**144.15**
Fixed Assets						
Buildings	1,00,000	100.00	1,30,000	130.00	1,50,000	150.00
Furniture	35,000	100.00	20,000	57.15	35,000	100.00
Total fixed assets	**1,35,000**	**100.00**	**1,50,000**	**111.11**	**1,85,000**	**137.04**
Current assets:						
Stock	25,000	100.00	18,500	74.00	75,000	300.00
Debtors	10,000	100.00	15,000	150.00	25,000	250.00
Cash	35,000	100.00	25,000	71.43	10,500	30.00
Total current assets	**70,000**	**100.00**	**58,500**	**83.57**	**1,10,500**	**157.86**
Total assets	**2,05,000**	**100.00**	**2,08,500**	**101.71**	**2,95,500**	**144.15**

CASH FLOW STATEMENT

BASIC PRINCIPLES OF CASH FLOW STATEMENT

1. **Operating Activity:** it records the cash flows of all operating expenses and all cash flows through current assets (except cash and bank balances) and current liabilities.
2. **Investment Activity:** it records the cash flows through only purchase and sale of fixed assets and investments
3. **Financing Activity:** it records cash flows through only issue of equity shares, debentures and preference capital and redemption of debentures and preference share capital and payment of dividend.

General rules to be followed while preparing CFS:

- **Any changes in the balance sheet between two given years will reflect in the CFS.**
- **Changes will affect either cash or profit**
- **Changes affecting profit will reflect in profit and loss appropriation account**
- **Changes affecting cash will reflect in cash flow statement.**

Format of Profit & Loss Appropriation Account

Calculation of Cash From Operations

Particulars	Amount	Particulars	Amount
To depreciation on Fixed Assets	XX	By Balance B/d	XX
To Increase in reserve	XX	By profit on sale fixed assets	XX
To Increase in provisions	XX	By Decrease in reserve	XX
To loss on sale of fixed assets	XX	By Increase in Goodwill	XX
To goodwill written off	XX	By Interest on investment	XX
To premium on redemption of debentures or preference shares	XX	By Discount on redemption of debentures or preference shares	XX
To interim dividend paid	XX	BY Cash from operations (b/f)	XX
To proposed dividend of Current year	XX		
To Balance C/d	XX		
	XXX		XXX

Format of Cash Flow Statement

Values shows with bracket are cash outflows

Particulars	Amount	Amount
Operating Activity:		
• Cash from operations	XX	
• **Add: Dec in CA and Inc in CL**	XX	
• **Less: Inc in CA and Dec in CL**	(XX)	
• Payment of Income tax	(XX)	
Cash from operating activity	XXX	XXX
Investment Activity:		
• Sale of fixed asset or investment	XX	
• Purchase of fixed assets or investments	(XX)	
Cash from investment activity	XXX	XXX
Financing Activity:		
• Issue of equity shares	XX	
• Issue of debentures	XX	
• Issue of preference shares	XX	
• Redemption of debentures	(XX)	
• Redemption of preference shares	(XX)	
• Payment of interim dividend	(XX)	
• Proposed dividend of previous year	(XX)	
Cash from financing activity	XXX	XXX
Cash from all the above activities		XXX
Add: Opening balance of cash or bank		XXX
Closing balance of cash or bank		XXX

Problems

1. Following are the balance sheets of a company as on 31st Dec. 2007 and 2008:

Liabilities	2007	2008	Assets	2007	2008
Share capital	1,39,000	1,45,000	Cash	18,000	15,600
Share premium	1,000	3,000	Debtors	29,800	35,400
Debentures	24,000	12,000	Stock	98,400	85,400
Creditors	20,000	23,680	Land	40,000	60,000
RDD	1,400	1,600	Goodwill	20,000	10,000
P & L A/c	20,800	21,120			
Total	2,06,200	2,06,400	Total	2,06,200	2,06,400

Additional information:

1. Dividend of Rs. 7,000 was paid during the year
2. Land was purchased for Rs. 20,000

Prepare cash flow statement.

Solution is as follows:

1. Adjustment of dividend paid will appear debit side of profit & loss appropriation account and again under the head financing activity in the CFS

2. Adjustment of land purchases appears only in CFS under investment activity.

Profit and Loss Appropriation Account			
Particulars	**Amount**	**Particulars**	**Amount**
To goodwill written off	10,000	By balance b/d	20,800
To dividend paid	7,000	By cash from operations (b/f)	17,320
To balance c/d	21,120		
	38,120		38,120

Cash Flow Statement	
Particulars	**Amount**
Operating Activities	
Cash from operations	17,320
Add: Dec in CA and Inc in CL	
Stock	13,000
Creditors	3,680
RDD	200
Less: Inc in CA and Dec in CL	
Debtors	(5,600)
(a) Cash from operating activity	**28,600**
Investment Activities	
Purchases of land	(20,000)
(b) Cash from investment activity	**(20,000)**
Financing Activity:	
Issue of share capital	6,000
Increase in share premium	2,000
Redemption of debentures	(12,000)
Payment of dividend	(7,000)
(c) Cash from financing activity	**(11,000)**
Cash from all the activities (a + b + c)	**(2,400)**
Add: Opening balance of cash balance	18,000
Closing balance of cash	**15,600**

2. Prepare cash flow statement for the year 2012 from the balance sheets as on 2011 and 2012.

Liabilities	2007	2008	Assets	2007	2008
Share capital General reserve P & L A/c Sundry creditors Provision for tax RDD	1,50,000 15,000 15,000 10,000 15,000 500	2,00,000 20,000 12,000 12,000 20,000 1000	Goodwill Building Plant Non trading investments Stock Bill Receivables Debtors Cash	15,000 1,00,000 35,000 10,000 15,500 5,000 20,000 5,000	12,000 1,42,000 40,000 12,000 12,000 7,000 25,000 15,000
Total	2,05,500	2,65,000	Total	2,05,500	2,65,000

Additional information:

1. Depreciation charged on plant was Rs. 10,000 and on building Rs. 7,000
2. Provision for taxation of Rs. 20,000 was made during the year 2007.
3. Interim dividend of Rs. 15,000 was paid during the year 2007.

Solution is as follows:

Plant A/c			
Particulars	**Amount**	**Particulars**	**Amount**
To balance c/d To cash a/c (b/f) (affecting cash)	35,000 **15,000**	By depreciation (affecting profit) By balance c/d	10,000 40,000
	50,000		50,000

Building A/c			
Particulars	**Amount**	**Particulars**	**Amount**
To balance c/d To cash a/c (b/f) (affecting cash)	1,00,000 **49,000**	By depreciation (affecting profit) By balance c/d	7,000 1,42,000
	1,49,000		1,49,000

Provision for Taxation A/c			
Particulars	**Amount**	**Particulars**	**Amount**
To cash a/c (b/f)	**15,000**	By balance b/d	15,000
(affecting cash)	20,000	By P& L A/c	20,000
To balance c/d)		(affecting profit)	
	50,000		35,000

Profit and Loss Appropriation Account			
Particulars	**Amount**	**Particulars**	**Amount**
To goodwill written off	3,000	By balance b/d	15,000
To increase in reserve	5,000	By cash from operations(b/f)	**57,000**
To depreciation			
Plant	10,000		
Buildings	7,000		
To provision for taxation	20,000		
To interim dividend paid	15,000		
To balance c/d	12,000		
	72,000		72,000

CASH FLOW STATEMENT	
Particulars	**Amount**
Operating Activities:	
Cash from operations	57,000
Add: Dec in CA and Inc in CL	
Stock	3,500
Sundry creditors	2,000
RDD	500
Less: Inc in CA and Dec in CL	
Bills receivables	(2,000)
Sundry debtors	(5,000)
Payment of tax	(15,000)
(a) Cash from operating activities	**41,000**
Investment Activities:	
Purchase of building	(49,000)
Purchase of plant	(15,000)
Purchase on non trading investment	(2,000)
(b) Cash from investment activities	**(66,000)**
Financing Activities:	
Issue of share capital	50,000
Interim dividend paid	(15,000)
(c) Cash from financing activities	**35,000**
(d) Cash from above activities (a + b + c)	**10,000**
(e) Opening balance of cash	5,000
(f) Closing balance of cash	**15,000**

4. Ratio Analysis

Learning Objectives

- Identify the ratios used to measure the well-being of the common shareholder, and state each ratio's formula and interpretation.
- Identify the ratios used to measure the well-being of the short-term creditor, and state each ratio's formula and interpretation.
- Identify the ratios used to measure the well-being of the long-term creditor, and state each ratio's formula and interpretation.

Introduction

Ratio analysis is a very powerful and most commonly used tool of analysis and interpretation of financial statements. It helps to analyze the past performance of a company and to make future projections. A ratio is an arithmetical relationship between two figures. Financial ratio analysis is a study of ratios between various items or groups of items in financial statements.

It is used as a benchmark for evaluating the financial position and performance of a firm. Ratios help to summarize large quantities of financial data and to make qualitative judgement about the firm’s financial performance.

Ratios are classified into four important categories. They are,

i. Liquidity ratios.
ii. Solvency ratios.
iii. Activity ratios.
iv. Profitability ratios.

i. Liquidity ratios:

It is extremely essential for a firm to be able to meet its obligations as they become due. Liquidity ratios measure the ability of the firm to meet its current obligations. Liquidity ratios try to establish a relationship between current liabilities and current assets. The most common ratios which indicate the extent of liquidity or lack of it are:

a) Current ratios

b) Quick ratios
c) Absolute liquid ratios

a) Current ratios:

This ratio is most commonly used to perform the short term financial analysis. Current ratio measures firm's short term solvency. It is the ratio of total current assets to total current liabilities. This ratio is calculated by dividing current assets by current liabilities.

$$\textbf{Current ratio} = \frac{\textbf{Current assets}}{\textbf{Current liabilities}}$$

Current assets includes cash in hand and at bank, readily marketable securities, bills receivable, sundry debtors less provision for bad and doubtful debts, stock in trade, prepaid expenses and loans and advances.

Current liabilities includes all the obligations maturing within a year, such as Sundry creditors, bills payable, bank overdraft, income tax payable, dividends payable, outstanding expenses, provision for taxation and unclaimed dividends

Interpretation:

Normally, a current ratio of 2:1 is considered satisfactory. It indicates the availability of current assets in rupees for every one rupee of current liability. A ratio of greater than one means that the firm has more current assets than current claims against them.

b) Quick ratios:

This ratio is also called as Acid test ratio or liquid ratio. It is a more severe test of liquidity of a company. Quick ratio establishes a relationship between quick or liquid assets and current liabilities. It shows the ability of a business to meet its immediate financial commitments. Quick ratio is obtained by dividing quick current assets by current liabilities. Thus,

$$\textbf{Quick Ratio} = \frac{\textbf{Quick assets}}{\textbf{Current liabilities}}$$

Quick assets include cash and bank, sundry debtors excluding bad debts, readily marketable securities bills receivables except prepaid expenses and inventories.

Current liabilities include all current liabilities except bank overdraft.

Interpretation:

Normally, a quick ratio of 1:1 is considered to be satisfactory current financial position.

c) Absolute liquid ratios

This ratio is also known as super quick ratio or cash ratio. Absolute liquidity is represented by cash and near cash items. It is a ratio of absolute liquid assets to current liabilities. In the computation of this ratio, only the absolute liquid assets are compared with the liquid liabilities. Absolute liquid ratio is obtained by dividing absolute liquid assets by current liabilities. Thus,

$$\textbf{Absolute liquid ratio} = \frac{\textbf{Absolute liquid assets}}{\textbf{Current liabilities}}$$

Absolute liquid assets include cash, bank and marketable securities. Inventories and receivables are not considered as absolute liquid assets since there may be some doubt in their liquidity.

Interpretation:

A standard of 0.5:1 absolute liquidity ratio is considered an acceptable norm. This states that fifty percent worth of absolute liquid assets are considered sufficient for one rupee worth of current liabilities.

ii. Solvency ratios:

This is also known as capital structure ratios or gearing ratios or leverage ratios. These ratios indicate the mix of funds provided by owners and lenders. This ratio throws a light on the long term solvency of a firm. These ratios are calculated to measure the financial risk and the firm's ability of using debt to share holder's advantage.

Some of the important solvency ratios are:

a) Debt Equity ratio
b) Proprietary ratio

c) Interest coverage ratio
d) Debt to total funds ratio
e) Capital gearing ratio

a) Debt Equity ratio

The relationship between borrowed funds and owner's capital is a popular measure of the long term solvency of a firm. Debt equity ratio measures the ratio of long term or total debt to share holder's equity. Thus, this ratio reflects the relative claim of creditors and share holders against the assets of the firm. Formula for calculating debt equity ratio is,

$$\textbf{Debt Equity ratio} = \frac{\textbf{Long term debts}}{\textbf{Share holder's funds}}$$

Long term debts include debentures, mortgage loan, bank loan, loan from financial institution, public deposits.

Share holder's fund includes equity share capital, preference share capital, share premium, capital reserve, general reserve, and other reserves.

Interpretation:

The debt equity ratio of 1:1 is generally acceptable. A low debt equity ratio reflects more security to long term creditors. From security point of view, capital structure with less debt and more equity is considered favourable as it reduces the chances of bankruptcy. A high ratio, on the other hand, is considered risky as it may put the firm into difficulty in meeting its obligations to outsiders.

b) Proprietary ratio

Proprietary ratio establishes a relationship between shareholders funds to total assets. It measures the proportion of assets financed by equity. It indicates the extent to which assets are financed by owner's funds. It is calculated as follows

$$\textbf{Proprietary ratio} = \frac{\textbf{Share holder's funds}}{\textbf{Total assets}}$$

Share holder's fund includes ordinary share capital, preference share capital, all items of reserves and surplus.

Total assets include all tangible assets and only those intangible assets which have a definite realizable value.

Interpretation:

The proprietary ratio of 1:2 is considered to be safe. A higher proprietary ratio indicated a larger safety margin for creditors. It tests the ability of the shareholders' funds to meet the outside liabilities. A low Proprietary Ratio, on the other hand, indicated a greater risk to the creditors.

c) Interest coverage ratio

This ratio is also known as 'Time interest earned ratio'. This ratio measures the debt servicing capacity of a firm insofar as fixed interest on the long term loan is concerned. It helps to indicate whether the business earns sufficient profit to pay periodically the interest charges. This ratio is determined through the following formula:

$$\textbf{Interest Coverage ratio} = \frac{\textbf{Earnings before interest \& tax}}{\textbf{Fixed interest charges}}$$

Interpretation:

It reveals the number of times interest on long-term debt is covered by the profits available for interest. A higher ratio ensures safety of interest payment debt and it also indicates availability of surplus for shareholders.

d) Debt to total funds ratio:

This ratio shows the relationship between debts and total funds employed in the business. In this ratio, the outside liabilities are related to the total capitalization of the firm and not merely to the share holder's equity. This ratio can be determined through the following formula;

$$\textbf{Debt to total funds ratio} = \frac{\textbf{Debt}}{\textbf{Total Funds}}$$

The term Debt includes long term loans and current liabilities like sundry creditors, bills payable, bank overdraft, outstanding expenses, etc...

Total fund includes share holder's funds, long term funds and current liabilities.

Interpretation:

This ratio shows the proportion of funds supplied by outsiders in the total funds employed in the business. The lower the ratio, the better it is for the creditors and vice versa. The higher this ratio, it gives a feeling of insecurity to the creditors. This ratio also serves the purpose of indicating the possibility of raising additional loans.

iii. Activity ratios:

Activity ratios are also called as Performance ratios or Turnover ratios or Asset utilization ratios or Efficiency ratios. Activity ratios are concerned with measuring the efficiency in asset management. These measure the speed with which various assets are converted into sales or cash.

Thus, these ratios express the relationship between sales and various assets. Higher turnover ratio indicates the better use of capital resources which in turn has a favourable effect on the profitability of the firm. Some of the important activity ratios are:

a) Inventory turnover ratio
b) Debtor turnover ratio
c) Fixed Asset turnover ratio
d) Working Capital turnover ratio
e) Creditor turnover ratio.

a) Inventory Turnover ratio:

This ratio indicates the number of times inventory is replaced during the year. It measures the relationship between the cost of goods sold and the inventory level. It indicates the efficiency of the firm in producing and selling its product. This ratio is computed in two ways. They are,

I. Inventory turnover ratio = $$\frac{\textbf{Cost of goods sold}}{\textbf{Average inventory}}$$

Cost of goods sold is calculated as,

COGS = Sales – Gross profit

Or

COGS = opening stock + purchases + carriage inwards + direct expenses – closing stock

Average stock is calculated as,

$$\textbf{Average stock} = \frac{\textbf{Opening stock + Closing stock}}{\textbf{2}}$$

But, for a manufacturing company, inventory of finished goods is used to calculate the inventory turnover.

II. **Inventory turnover ratio** $= \dfrac{\textbf{Sales}}{\textbf{Closing stock}}$

Interpretation:

It indicates the speed with which inventory is converted into sales. A higher ratio indicated that stock is selling quickly. Low stock turnover ratio indicates that stock is not selling quickly and remaining idle resulting in increased storage cost and blocking of funds. High turnover is good but it must be carefully interpreted as it may be due to buying in small lots or selling quickly at low margin to realize cash. Thus, a firm should have neither a very high nor a vet low stock turnover ratio.

b) Debtor Turnover ratio:

The second major activity ratio is debtor turnover ratio. It is also called as Receivables turnover ratio. This ratio indicates the relationship between net credit sales and trade debtors. It shows the rate at which cash is generated by the turnover of debtors. It is a test of the liquidity of the debtors of a firm. The liquidity of a firm's receivables can be examined in two ways. They are,

I. Debtors turnover ratio

II. Average collection period.

I. Debtors turnover ratio

This ratio is calculated through the following formula.

$$\textbf{Debtors turnover ratio} = \frac{\textbf{Credit Sales}}{\textbf{Average Debtors}}$$

Credit sales = Total sales – cash sales

$$\textbf{Average debtors} = \frac{\textbf{Opening debtors + closing debtors}}{\textbf{2}}$$

The term debtors include trade debtors and bills receivables. Doubtful debts are not deducted from debtors.

II. Average collection period:

It is the average amount of time needed to collect accounts receivable. This is, in fact, interrelated with, and dependent upon, the receivables turnover ratio. This can be computed through the following formula;

$$\textbf{Average collection period} = \frac{\textbf{Days in the year}}{\textbf{Debtor turnover ratio}}$$

Interpretation:

The efficiency of debt collection is indicated in this ratio. A higher debtor turnover ratio indicates that debts are being collected more quickly. A change in this ratio shows the changes in the company's credit policy or changes in its ability to collect from its debtors. Quick collection from debtors increases the liquidity of the firm. Hence, this ratio is an excellent supplement to the information provided by current ratio.

c) Fixed Asset Turnover ratio:

This ratio is also known as the investment turnover ratio. This ratio indicates the efficiency with which firm uses all its assets to generate sales. This ratio establishes a relationship between net sales and net fixed assets. It determined the efficiency with which the firm is utilizing its fixed assets. It is computed as,

$$\textbf{Fixed asset turnover ratio} = \frac{\textbf{Sales}}{\textbf{Net fixed assets}}$$

The term net fixed assets means value of fixed assets after depreciation.

Interpretation:

This ratio reveals how efficiently the fixed assets are being utilized. It indicates the firms' ability to sales per rupee of investment in fixed assets. A high ratio indicates more efficient utilization of fixed assets.

d) Working capital Turnover ratio:

This ratio establishes the relationship between net Sale and working capital. It determines the efficiency or inefficiency in the utilization of working capital in making sales**.** It is calculated as,

$$\textbf{Working capital turnover ratio} = \frac{\textbf{Sales}}{\textbf{Net working capital}}$$

The term net working capital means current assets minus current liabilities.

Interpretation:

This ratio indicates the firms' ability to generate sales per rupee of working. A higher ratio would normally indicate more efficient utilization of working capital. A low ratio may indicate excess of net working capital.

e) Creditor Turnover ratio:

This ratio is also known as Payable turnover ratio. This ratio establishes a relationship between net credit purchases and average creditors or payables during the year. It determines the efficiency with which the Creditors are paid. It is calculated as,

$$\textbf{Creditor turnover ratio} = \frac{\textbf{Net credit purchases}}{\textbf{Average creditors}}$$

Net credit purchases = Total purchases – cash purchases

$$\textbf{Average creditors} = \frac{\textbf{Opening creditors + Closing creditors}}{\textbf{2}}$$

Interpretation:

It indicates the speed with which the creditors are paid. A higher ratio indicates a shorter payment period. Lower ratio means credit allowed by the supplier is for a long period or it may reflect delayed payment to suppliers which is not a very good policy as it may affect the reputation of the business.

iv. Profitability ratios:

Every business should earn sufficient profits to survive and grow over a long period of time. Profitability ratios are calculated to analysis the earning capacity of the business which is the outcome of utilization of resources employed in the business. There is a close relationship between the profit and the efficiency with which the resources employed in the business are utilized. Profitability of a business may be measures in two ways. They are;

1. Profitability in relation to sales
2. Profitability in relation to investment

1. Profitability in relation to sales:

This indicates the amount of profit per rupee of sales. If adequate profits are not earned on sales, there will be difficulty in meeting the operating expenses and no returns will be available to the owners. This includes;

a) Gross profit ratio
b) Net profit ratio
c) Operating ratio

a) Gross profit ratio:

This is also known as Gross margin ratio. This ratio measures the percentage of each sales rupee remaining after the firm has paid for its goods. It determines the efficiency with which production, purchase and selling operations are being carried on. It is computed as,

$$\textbf{Gross profit ratio} = \frac{\textbf{Gross profit}}{\textbf{Net sales}} \times 100$$

Net sales means sales deducted from sales returns.

Interpretation:

Gross Profit is the difference between sale and cost of goods sold. Gross Profit margin reflects the efficiency with which the management produces each unit of output. It also includes the margin available to cover operating expenses and non operating expenses. A high Gross Profit margin relative to the industry average employees that the firm is able to produced at comparatively at lower cost.

b) Net profit ratio:

This ratio is also known as Net margin ratio. This measures the relationship between net profits and sales of a firm. It indicates management's efficiency in manufacturing, administering and selling the product. It measures the percentage of each sales rupee remaining after all costs and expenses including interest and taxes have been deducted.

Formula for the computation of net profit ratio is,

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

Interpretation:

This ratio measures the firms' ability to turn each rupee sales into net profit. A firm with high net profit margin would be in an advantageous position to survive in the face of falling selling prices, rising cost of production or declining demand for the product.

c) Operating ratio:

This is an important profitability ratio. Operating Ratio establishes relationship between operating cost and net sales. It determines the operational efficiency with the production, purchase and selling operations are being carried on. It is calculated as follows:

$$\textbf{Operating ratio} = \frac{\textbf{Cost of goods sold + operating expenses}}{\textbf{Net sales}} \times 100$$

Operating expenses includes office expenses, administrative expenses, selling expenses and distribution expenses.

Interpretation:

The operating ratio is the yardstick to measure the efficiency with which a business is operated. A high operating ratio is considered unfavourable because it leaves a smaller margin of profit to meet non operating expenses. A lower operating ratio is considered a good sign.

2. **Profitability in relation to investment:**

   This indicates the amount of profit per rupee invested in assets. This includes;

   a) Return on Investments
   b) Return on Equity
   c) Earnings per share
   d) Price earnings ratio
   e) Dividend payout ratio

a) Return on investments:

This is the most important test of profitability of a business. This ratio establishes the relationship between net profit before Interest and Tax and capital employees. It measures how efficiently the long-term funds supplied by the long-term creditors and shareholders are being used. It is expressed as a percentage. Thus, it is computed as follows

$$\textbf{ROI} = \frac{\textbf{Profit before interest and tax}}{\textbf{Capital employed}} \times 100$$

The term capital employed means long term debt + Equity.

Or

Capital employed = Fixed assets + Working capital

Interpretation:

It explains the overall utilization of fund by a business. It reveals the efficiency of the business in utilization of funds entrusted to it by, share holders, debenture-holders and long-term liabilities. The higher the ROI, the more efficient the management is considered to be in using the funds available.

b) Return on Equity:

A return on share holder's equity is calculated to see the profitability of owner's investment. It is calculated through the following formula;

$$\textbf{ROE} = \frac{\textbf{Profit after tax}}{\textbf{Share holder's equity}} \times 100$$

Share holder's fund includes paid up share capital, share premium, reserves and surplus less accumulated losses.

Interpretation:

ROE indicates how well the firm uses the resources of owners. This ratio should be compared with the ratios of other similar companies to determine whether the rate of return is attractive.

c) Earnings per share:

This ratio measures the earnings available to equity shareholders per share. It indicates the profitability of the firm on a per share basis. The profits available to the ordinary shareholders are represented by net profits after taxes and preference dividends. It is calculated as;

$$\textbf{EPS} = \frac{\textbf{Earnings available to equity shareholders}}{\textbf{Number of ordinary shares outstanding}}$$

Interpretation:

This ratio is very important from equity shareholders point of view and so also for the share price in the stock market. This also helps comparison with other firm's to ascertain its reasonableness and capacity to pay dividend. But increase in Earnings per share does not always indicate increase in profitability because sometimes, when bonus shares are issued, earning per share would decrease. In these cases, the earning per share is misleading as the actual earning has not decreased.

d) Price earnings ratio:

This ratio establishes a relationship between market price per share and earnings per share. The objective of this ratio is to find out the expectations of the shareholders. This ratio is the market price of shares expressed as multiple of earnings per share. This ratio is calculated as;

$$\textbf{P/E ratio} = \frac{\textbf{Market price per equity share}}{\textbf{EPS}}$$

Interpretation:

It indicates the numbers of times of EPS the share is being quoted in the market. It reflects investors' expectation about the growth in the firms' earning and reasonableness of the market price of its shares. The higher is the ratio, the larger is the investor's confidence in the firm's future.

e) Dividend payout ratio:

This is also known as payout ratio. It measures the relationship between the earnings belonging to the ordinary share holders and the dividend paid to them. It can be calculated by dividing the total dividend paid to the owners by the total earnings available to them.

$$\textbf{DPR} = \frac{\textbf{Dividends per share}}{\textbf{EPS}}$$

Interpretation:

It expresses the relationship between what is available per share and what is actually paid in the form of dividends out of available earnings. This ratio reflects company's' dividend policy. A higher payout ratio may mean lower retention or a deteriorating liquidity position.

Problems on Ratio Analysis

1. From the following details, you are required to compute current ratio and comment on its position:

Stock: Rs.1,25,000	Bank Overdraft: Rs. 1,10,000
Sundry Debtors: Rs. 75,000	Outstanding Expenses: Rs.40,000
Bills Receivables: Rs. 80,000	Short term Investments: Rs. 20,000
Bills Payable: Rs. 20,000	Cash in Hand: Rs. 50,000
Cash at bank: Rs. 50,000	Sundry Creditors: Rs. 40,000

Solution is as follows:

Current Assets = stock + debtors + B/R + cash at bank + short term investments + cash in hand.

Current assets = 1,25,000 + 75,000 + 80,000 + 50,000 + 20,000 + 50,000 = **4,00,000**

Current liabilities = B/P + Bank overdraft + O/s expenses + sundry creditors

Current liabilities = 20,000 + 1,10,000 + 40,000 + 40,000 = **2,10,000**

$$Current\ Ratio = \frac{Current\ Assets}{Current\ liabilities} \qquad Quick\ Ratio = \frac{Quick\ Assets\,(Current\ assets - Stock)}{Current\ liabilities}$$

$$Current\ Ratio = \frac{4{,}00{,}000}{2{,}10{,}000} = 1.90 \qquad Quick\ Ratio = \frac{2{,}75{,}000}{2{,}10{,}000} = 1.31:1$$

Comment: company’s short term financial position is financially sound as its current ratio is 1.90 : 1 for a standard of 2 : 1.

2. From the following compute Quick Ratio of an Organisation:

Cash in hand: Rs. 5,000	Bills Payable: Rs. 10,000
Cash at bank: Rs. 3,000	Sundry Creditors: Rs. 5,000
Stock: Rs. 5,000	Outstanding Expenses: Rs. 25,000
Sundry debtors: Rs. 20,000	Bank loan: Rs. 15,000
Prepaid expenses: Rs. 2,000	

Solution is as follows:

$$Current\ Ratio = \frac{Current\ Assets}{Current\ liabilities} \qquad Quick\ Ratio = \frac{Quick\ Assets\,(Current\ assets - Stock)}{Current\ liabilities}$$

$$Current\ Ratio = \frac{35{,}000}{55{,}000} = 0.64:1 \qquad Quick\ Ratio = \frac{30{,}000}{55{,}000} = 0.55:1$$

3. Current liabilities of a company are Rs. 3,00,000. Its current ratio is 3:1 and Quick ratio is 0.75:1. Calculate the value of stock.

Solution is as follows:

Stock = Current Assets – Quick Assets

Stock = 9,00,000 – 2,25,000 = 6,75,000

To determine current assets we need to apply current ratio:

$$Current\ Ratio = \frac{Current\ Assets}{Current\ liabilities} \qquad Quick\ Ratio = \frac{Quick\ Assets}{Current\ liabilities}$$

$$3 = \frac{Current\ Assets}{3{,}00{,}000} \qquad 0.75 = \frac{Quick\ Assets}{3{,}00{,}000}$$

$$Current\ assets = 9{,}00{,}000 \qquad Quick\ Assets = 2{,}25{,}000$$

4. Working capital of a company is Rs. 3,00,000. Its current ratio is 2.5 and quick ratio is 1.5. Find out the value of 1) current assets, 2) current liabilities and 3) closing stock.

Solution is as follows:

a. Current assets: to determine the current assets, current ratio is to be applied, but in the absence of current assets and current liabilities, working capital equation will be taken as the base to determine components of current ratio:

Current ratio is 2.5: 1, that is current assets will be 2.5 and current liabilities is 1

Working Capital = Current assets – current liabilities

Working capital = 2.5 – 1 = 1.5

Of the above three components, we know the value of working capital which is Rs. 3,00,000. Taking base as working capital we can determine CA and CL

So, when WC is 1.5, CA is 2.5, and

when WC is 3,00,000, CA will be $3{,}00{,}000\,x\,\dfrac{2.5}{1.5} = 5{,}00{,}000$

Current Assets = Rs. 5,00,000

Current Liabilities = CA – WC

Current liabilities = 5,00,000 – 3,00,000 = 2,00,000

Closing stock = Current Assets – Quick Assets

Closing stock = 5,00,000 – *3,00,000 = 2,00,000

To know quick assets, we need to apply Quick Ratio

$$*\,Quick\ Ratio = \frac{Quick\ Assets}{Current\ Liabilities}$$

$$1.5 = \frac{Quick\ Assets}{2{,}00{,}000} = 3{,}00{,}000$$

5. Stock turnover ratio is 5 times. Average stock is Rs. 60,000. Rate of gross profit is 20% on sales. Calculate sales and gross profit.

Solution is as follows:

Sales:

*to determine cost of goods sold, we need to apply stock turnover ratio

$$Stock\ turnover\ ratio = \frac{Cost\ of\ goods\ sold}{Average\ stock}$$

$$5 = \frac{Cost\ of\ goods\ sold}{60{,}000} = 3{,}00{,}000$$

$$When\ gross\ profit\ is\ 20\%\ in\ sales, remaining\ 80\%\ is\ cost\ of\ goods\ sold$$

$$when\ COGS\ is\ 80\%, sales\ is\ 100\%$$

$$when\ COGS\ is\ 3{,}00{,}000, sales\ will\ be\ 3{,}00{,}000\ x\frac{100}{80} = 3{,}75{,}000$$

$$Sales = 3{,}75{,}000$$

$$**gross\ profit\ is\ 20\%\ of\ sales = 3{,}75{,}000\ x\frac{20}{100} = 75{,}000$$

$$Gross\ profit = 75{,}000$$

6. The ratio's relating to Cosmos Ltd., are given as follows:

Gross Profit ratio 15%, Stock Velocity – 6 months, Debtors velocity – 3 months, Creditors velocity – 3 months. Gross profit for the year ending 31.12.2010 amounts to Rs. 60,000. Closing stock is more by 5,000 than opening stock.

Find out: 1) sales, 2) closing stock, 3) debtors and 4) creditors.

Solution is as follows:

a. **Calculation of sales using gross profit ratio:**

$$GP\ Ratio = \frac{Gross\ Profit}{Sales}\ x100$$

$$\frac{15}{100} = \frac{60{,}000}{Sales}$$

$$Sales = \frac{60{,}000\ x100}{15} = 4{,}00{,}000$$

b. **Calculation of closing stock using Stock turnover ratio**

$$STR = \frac{Cost\ of\ goods\ sold}{Average\ Stock}$$

$$STR = 12/6 = 2\ times$$

$$Cost\ of goods\ sold = Sales - Gross\ profit$$

$$Cost\ of goods\ sold = 4,00,000 - 60,000 = 3,40,000$$

$$2 = \frac{3,40,000}{Average\ Stock}$$

$$Average\ stock = 3,40,000/2 = 1,70,000$$

$$Average\ stock = \frac{opening\ stock + closing\ stock}{2}$$

$In\ the\ above\ equation, closing\ stock\ is\ more\ by\ Rs.5,000\ than\ opening\ stock.$

$In\ that\ case\ opening\ stock\ will\ be\ (X)\ and\ closing\ stock\ will\ be\ (opening\ stock + X)$

$$1,70,000 = \frac{X + (X + 5,000)}{2}$$

$$1,70,000 = \frac{2X + 5,000}{2}$$

$$3,40,000 = 2X + 5,000$$

$$2X = 3,40,000 - 5,000$$

$$X = 3,35,000/2 = 1,67,500$$

$$Closing\ stock = 1,67,500 + 5,000 = 1,72,500$$

c. Calculation of Debtors using Debtors Turnover Ratio

DTR = 12/3 = 4 times

$$DTR = \frac{Net\ credit\ sales}{Average\ Receivables}$$

$$4 = \frac{4,00,000}{AR}$$

$$AR = 4,00,000/4 = 1,00,000$$

$In\ the\ absense\ of\ Bills\ Receivables, AR\ is\ known\ as\ Debtors$

$$Debtors = 1,00,000$$

d. Calculation of Creditors by using Creditors Turnover Ratio

CTR = 12 / 3 = 4 times

$$CTR = \frac{Net\,credit\ purchases}{Average\ payables}$$

$$To\ find\ purchases, apply\ \cos t\ of\ goods\,sold\ equation$$

$$Cost\,of\ goods\,sold = OS + Purchases + Direct\ \exp enses - CS$$

$$3{,}40{,}000 = 1{,}67{,}500 + purchases - 1{,}72{,}500$$

$$Purchases = 3{,}40{,}000 + 5{,}000 = 3{,}45{,}000$$

$$4 = \frac{3{,}45{,}000}{AP}$$

$$AP = \frac{3{,}45{,}000}{4} = 86{,}250$$

$$Creditors = Rs.86{,}250$$

7. Following is the Balance sheet of BSL Ltd as on 31.12.2012

Liabilities	Amount	Assets	Amount
Equity capital	10,00,000	Net fixed assets	8,00,000
Reserves	4,00,000	Stock	2,00,000
Secured loans	3,00,000	Debtors	6,00,000
Short term liabilities	4,00,000	Loans & Advances	5,00,000
Total	21,00,000	Total	21,00,000

You are required to compute:

Debt equity ratio, Current Ratio, Quick Ratio, Net worth Ratio and Fixed assets to Net worth ratio

Solution is as follows:

a. Debt-equity ratio:

$$Debt - equity\,ratio = \frac{Debt}{equity}$$

$$Debt = Secured\ loans + short\ term\,liabilitie\,s$$

$$Debt = 3{,}00{,}000 + 4{,}00{,}000 = 7{,}00{,}000$$

$$Equity = Equity\,capital + \mathrm{Re}\ serves$$

$$Equity = 10{,}00{,}000 + 4{,}00{,}000 = 14{,}00{,}000$$

$$DE\ Ratio = \frac{7{,}00{,}000}{14{,}00{,}000} = 0.5:1$$

b. Current Ratio:

$$CR = \frac{Current\ Assets\,(CA)}{Current\ Liabilitie\,s\,(CL)}$$

$$CA = Stock + Debtors + Loans\ \&\ Advances$$

$$CA = 2{,}00{,}000 + 6{,}00{,}000 + 5{,}00{,}000 = 13{,}00{,}000$$

$$CL = Short\ term\ liabilitie\,s$$

$$CL = 4{,}00{,}000$$

$$CR = \frac{13{,}00{,}000}{4{,}00{,}000} = 3.25:1$$

c. Quick Ratio:

$$Quick\ Ratio = \frac{Quick\ Asset\ (CA - Stock)}{Current\ Libilities}$$

$$QA = 13{,}00{,}000 - 2{,}00{,}000 = 11{,}00{,}000$$

$$CL = 4{,}00{,}000$$

$$QR = \frac{11{,}00{,}000}{4{,}00{,}000} = 2.75:1$$

d. Net Worth Ratio:

$$Net\ worth\,ratio = Equity\ capital + \mathrm{Re}\ serves = 10{,}00{,}000 + 4{,}00{,}000 = 14{,}00{,}000$$

e. Fixed assets to Net Worth Ratio:

$$Fixed\ asset\ to\ net\ worth\,ratio = \frac{Fixed\ assets}{Networth\,ratio} = \frac{8{,}00{,}000}{14{,}00{,}000} = 0.57:1$$

8. The following are the summarized profit and loss account of XYZ Ltd for the year ending 31.12.2010 and Balance as on that date:

Particulars	Amount	Particlars	Amount
To Opening stock	99,500	By Sales	8,50,000
To Purchases	5,45,250	By Closing stock	1,49,000
To Wages	14,250		
To Gross profit c/fd	3,40,000		
Total	9,99,000	Total	9,99,000
To operating Expenses:		By Gross profit B/fd	3,40,000
Admn. Expenses	15,000	By Profit on sales of shares	9,000
Selling Expenses	30,000		
Financial Expenses	1,50,000		
To Non-operating Exp	4,000		
To Net profit	1,50,000		
Total	3,49,000	Total	3,49,000
BALANCE SHEET			
Liabilities	Amount	Assets	Amount
Equity share capital	2,00,000	Land & buildings	1,50,000
(Rs.100 each)		Plant & machinery	80,000
Reserves	90,000	Stock is trade	1,49,000
Current liabilities	1,30,000	Sundry debtors	71,000
Profit & Loss account	60,000	Cash & bank balances	30,000
Total	4,80,000	Total	4,80,000

Calculate: Current ratio, Quick ratio, Gross profit ratio, Net profit ratio, Operating profit Ratio, Operating ratio, Stock turnover ratio, Debtors turnover ratio, Average collection period, Creditors turnover ratio, Average payment period, Return on total resources and Turnover of Fixed assets.

Solution is as follows:

a. Current Ratio (CR):

$$CR = \frac{CA}{CL} = \frac{2,50,000*}{1,30,000} = 1.92:1$$

$$*CA = Stock + Sundry\ debtors + Cash = 1,49,000 + 71,000 + 30,000 = 2,50,000*$$

b. Quick Ratio (QR)

$$QR = \frac{QA(CA - stock)}{CL} = \frac{1,01,000}{1,30,000} = 0.78:1$$

c. Gross Profit Ratio (GPR)

$$GPR = \frac{Gross\ Profit}{Sales} x100 = \frac{3,40,000}{8,50,000} x100 = 40\%$$

d. Net Profit Ratio (NPR)

$$NPR = \frac{Net\ Profit}{Sales} x100 = \frac{1,50,000}{8,50,000} x100 = 17.65\%$$

e. Operating Profit Ratio (OPR)

$$OPR = \frac{Operating\ profit}{Sales} x100 = \frac{*1,45,000}{8,50,000} x100 = 17.06\%$$

$$Operating\ Profit = Net\ Profit + NOE - NOI$$

$$*Operating\ profit = 1,50,000 + 4,000 - 9,000 = 1,45,000$$

f. Operating Ratio (OR)

$$OR = \frac{Cost\ of\ goods\ sold + Operating\ expenses}{Sales} x100 = \frac{5,10,000 + 1,95,000}{8,50,000} x100 = 82.94\%$$

$$Cost\ of\ goods\ sold = Sales - Gross\ profit = 8,50,000 - 3,40,000 = 5,10,000$$

$$Operating\ expenses = 15,000 + 30,000 + 1,50,000 = 1,95,000$$

g. Stock Turnover Ratio (STR)

$$STR = \frac{Cost\ of\ goods\ sold}{Average\ stock} = \frac{5,10,000}{1,24,250*} = 4.10\ times$$

$$*Average\ stock = OS + CS/2 = 99,500 + 1,49,000/2 = 1,24,250$$

h. Debtors Turnover Ratio (DTR)

$$DTR = \frac{Net\ credit\ sales}{Average\ receivables} = \frac{8,50,000}{71,000} = 11.97\ times$$

$$Average\ receivables = Closing\ bills\ receivables + CD = 0 + 71,000 = 71,000$$

i. **Average Collection Period (ACP)**

$$ACP = \frac{No.of\ days\ in\ a\ year}{DTR} = \frac{365}{11.97} = 30.49\ days$$

j. **Creditors Turnover Ratio (CTR)**

$$CTR = \frac{Net\ credit\ purchases}{Average\ payables} = \frac{5{,}45{,}250}{1{,}30{,}000} = 4.19\ times$$

$$Average\ payables = Creditors\ (Current\ liabilitie\ s) = 1{,}30{,}000$$

k. **Average Payment Period (APP)**

$$APP = \frac{No.of\ days\ in\ a\ year}{CTR} = \frac{365}{4.19} = 87.11\ days$$

l. **Return on Total Resources (ROI)**

$$ROI = \frac{Net\ profit}{Total\ resources\ (total\ asets)} x100 = \frac{1{,}50{,}000}{4{,}80{,}000} x100 = 31.25\%$$

m. **Turnover of Fixed Assets (TFA)**

$$TFA = \frac{Sales}{Fixed\ assets} = \frac{8{,}50{,}000}{2{,}30{,}000} = 3.70\ times$$

$$Fixed\ assets = L\ \&\ B + P\ \&\ M = 1{,}50{,}000 + 80{,}000 = 2{,}30{,}000$$

9. With the help of the following ratios regarding India Films Ltd, draw the Balance sheet of the company for the year 2010:

Current Ratio – 2.5; Liquidity Ratio – 1.5; Net working capital Rs. 3,00,000; Stock turnover ratio – 6 times; Gross Profit ratio 0 20%; Fixed Assets turnover ratio – 2 times; Debt Collection period – 2 months; Fixed Assets to shareholders net worth – 0.80; Reserves & surplus to capital – 0.50.

Solution is as follows:

Working Notes:

a. **Calculation of current assets and current liabilities using working capital (WC)**

WC = CA – CL

Current Ratio is 2.5, it means that CA are 2.5 and CL are 1. So WC is as follows: WC = CA – CL = 2.5 – 1 = 1.5

Of WC(1.5), CA(2.5) and CL(1), we know the value of WC. CA and CL are as follows:

If WC is 1.5, CA is 2.5, so, if WC is 3,00,000, then CA will be:

$$CA = \frac{3,00,000}{1.5} x\, 2.5 = 5,00,000$$
$$CL = CA - WC = 5,00,000 - 3,00,000 = 2,00,000$$

b. **Calculation of Stock:**

Stock = Current Assets (CA) – Quick Assets (QA)

To know QA we should apply Liquidity Ratio (Also known as quick ratio)

$$QR = \frac{QA}{CL} = 1.5 = \frac{QA}{2,00,000} = QA = 2,00,000\, x 1.5 = 3,00,000$$
$$Stock = 5,00,000 - 3,00,000 = 2,00,000$$

c. **Calculation of Sales**

Sales = Cost of Goods Sold – Gross Profit

Cost of Goods Sold can be known by applying Stock Turnover Ratio (STR)

$$STR = \frac{Cost\ of\ goods\ sold}{Average\ Stock} = 6 = \frac{Cost\ of\ goods\ sold}{2,00,000}$$
$$Cost\ of\ goods\ sold = 12,00,000$$
$$Gross\ profit = 20\%\ of\ sales$$
$$when\ gross\ profit\ is\ 20\%\ of\ sales, remaining\ 80\%\ of\ sales\ will\ be\ \cos t\ of\ goods\ sold$$
$$So, when\ \cos t\ of\ goods\ sold\ is\ 80\%, sales\ is\ 100\%. So,\ when\ \cos t\ of\ goods\ sold\ is\ 12,00,000,$$
$$Sales = \frac{12,00,000}{80} x 100 = 15,00,000$$

d. **Calculation of Fixed Assets by using Fixed Assets Turnover Ratio (FATR)**

$$FATR = \frac{Sales}{Fixed\ assets} = 2 = \frac{15,00,000}{Fixed\ assets} = Fixed\ Assets = 7,50,000$$

e. **Calculation of Debtors by using DTR**

DTR = 12/2 = 6 times

$$DTR = \frac{Credit\ sales}{Average\, \mathrm{Re}\, ceivbles\,(AR)} = 6 = \frac{15,00,000}{Average\, \mathrm{Re}\, ceviables\,(AR)} = AR = 2,50,000$$
$$In\ absense\ of\ bills\ receivables, AR\ will\ be\ debtors$$
$$Debtors = 2,50,000$$

f. **Calculation of Shareholders' Net Worth:**

Fixed Assets to Shareholders' net worth = FA / NW = 0.80

$$0.80 = \frac{7,50,000}{Net\,worth} = Net\,worth = \frac{7,50,000}{0.80} = 9,37,500$$

$$Net\,worth = 9,37,500$$

g. Calculation of Reserves & surplus to Share Capital using Net Worth

Reserves to share capital = 0.50:1

Net Worth = Reserves & Surplus +Share Capital

Net Worth = 0.50 + 1

Net Worth = 1.5

So, net worth is 1.5, share capital is 1. When Net worth is 9,37,500, share capital is

$$Share\,capital = \frac{9,37,500}{1.5} = 6,25,000$$

$$\text{Re}\,serves\,\&\,surplus\ = Net\,worth - Share\,capital$$

$$\text{Re}\,serves\,\&\,surplus = 9,37,500 - 6,25,000 = 3,12,500$$

Balance Sheet

Liabilities	**Amount**	**Assets**		**Amount**
Share capital	6,25,000	Fixed assets		7,50,000
Reserves & surplus	3,12,500	Current Assets:		
Current liabilities	2,00,000	Stock:	2,00,000	
Long term loans (b/f)	1,12,500	Debtors:	2,50,000	
		Cash (b/f):	50,000	5,00,000
Total	12,50,000	Total		12,50,000

Additional Problems for Practice

1. The working capital of ABC Ltd has deteriorated in recent years and now stands as under:

Current Liabilities	***Current Assets***
Creditors Rs. 4,90,000	Inventory Rs. 5,60,000
Bank loan Rs. 2,10,000	Debtors Rs. 3,50,000
	Cash Rs. 70,000

I. Calculate current and quick ratios

II. A further bank loan of Rs. 50,000 against debtor is under negotiation. Assuming the loan is received, calculate the revised current and quick ratio.

III. There is also a negotiation, going on for discounting the debtors Rs. 3,50,000 for Rs. 3,15,000 to a collection agency for immediate cash. Also absolute stock worth Rs. 1,25,000 is being sold for Rs. 80,000 of the cash to be realized by the two transactions, the bank loan is proposed to be reduced to Rs. 1,00,000

Calculate the current ratio after the transactions are put through

2. You are furnished the following information from the books of TSL Marketing Ltd., for the year ended 31.3.12:

Equity share capital (Rs. 10 each)	Rs. 8,00,000
9% Preference share capital (Rs. 10 each)	Rs. 3,00,000
Total	**Rs. 11,00,000**
Profit after tax at 60%	Rs. 2,70,000
Depreciation	Rs. 60,000
Equity dividend paid	20%
Market price per share	Rs. 40

Find out: a) dividend yield ratio, b) preference coverage and equity coverage ratio, c) earning per share, d) dividend payment ratio, and e) price earning ratio.

3. From the following ratios and further information given below, prepare a Trading A/c, Profit & Loss A/c and balance sheet of XTC Co. for the year 2010.

    i. Gross profit ratio – 25%

    ii. Net profit ratio – 20%

iii. Stock – turnover ratio – 10 times
iv. Net profit / capital – 1/5
v. Capital to Total liabilities – ½
vi. Fixed Assets to Capital – 5/4
vii. Fixed Assets / Total Current Assets – 5/7
viii. Fixed Assets – Rs. 10,00,000
ix. Closing stock – Rs. 1,00,000

4. Using the following data complete the Balance Sheet

a.	Gross profit (20%)		Rs. 60,000
b.	Share capital		Rs. 50,000
c.	Credit sales to total sales	80%	
d.	Total assets turnover (on sales)		3 times
e.	Stock turnover ratio		8 times
f.	Average collection period (360 days)		18 days
g.	Current ratio		1.6
h.	Long term debt to equity	40%	

Balance sheet as on ……….			
Liabilities	Amount	Assets	Amount
Equity capital	?	Fixed assets	?
Long term debts	?	Inventory	?
Creditors	?	Debtors	?
		Cash	?
Total	?	Total	?

5. From the following details of Conclave Ltd., prepare a balance sheet with as much as details as possible:

a.	Stock velocity	:	6
b.	Capital turnover ratio	:	2 times
c.	Fixed assets turnover ratio	:	4

d.	Gross profit ratio	:	20%
e.	Debtor's velocity	:	2 months
f.	Creditor's velocity	:	73 days

The gross profit was Rs. 60,000. Reserves and surplus amounted to Rs. 20,000. Closing stock is Rs. 5,000 in excess of opening stock.

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