

Unit : 3

FINANCIAL STATEMENT ANALYSIS (35%)

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3.1 INTRODUCTION

Financial statements, which primarily comprise the balance sheet and profit and loss account, serve as the foundation for financial analysis, planning, and decision-making. The balance sheet indicates the balance value of acquired assets and obligations, or, to put it another way, the financial situation of an organization at a specific point in time, whereas the profit and loss account illustrates the business's operating operations throughout time. However, not all essential and relevant data is included in the aforementioned statements.

In order to get the relevant and important information, the data shown in the financial statement must be analysed to determine the financial strengths and weaknesses of an organization.

A few analytical tools are available to the financial manager to aid in financial planning and analysis. Ratio analysis is one of the primary tools. In this chapter, let's talk about analyses of financial statement and ratio analysis.

3.2 MEANING OF FINANCIAL STATEMENTS

Financial statements represent two fundamental statements that an accountant prepares at the end of an accounting period for a business enterprise. These are:

The Balance Sheet (or Statement of Financial Position) shows the assets, liabilities, and capital as of a specific date.

The Profit and Loss Account (or Income Statement) illustrate the results of operations, i.e., profit or loss during a given time.

Aside from the Balance Sheet and Profit and Loss Account, the following financial statements are also created.

The Funds Flow Statement explains the rise or reduction in working capital across the accounting period.

The Cash Flow Statement explains the changes in cash position between the beginning and end of the accounting period.

These financial statements are the formal records of the financial activities of a business and provide an overview of its financial condition. For large companies, these statements are quite complex.

According to International Accounting Standards Board, *'the objectives of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions.'* In other words, A financial statement is an organized collection of data according to logical and consistent accounting procedures. Its purpose is to convey an understanding of some financial aspects of a business firm.

Information provided in the financial statements is not an end in itself, though the information provided is of immense use. Such information has to be analysed and interpreted to draw meaning of the figures provided. The goal in analysing the financial statements is to assess the past performance and current financial position and to make predictions about the future performance of the company. The users of these statements should dig deep into the data provided and analyse everything before arising at any economic decision.

3.3 OBJECTIVES OF FINANCIAL STATEMENTS

The following are the key goals of financial statements:

Providing Information for Economic Decisions: Users of financial statements must assess an organization's capacity to produce cash and cash equivalents, as well as the timeliness and predictability of that production, in order to make economic decisions. In the end, this ability establishes an organization's ability to pay its workers and suppliers, pay interest, pay back debts, and distribute profits to its owners.

Providing Information about Financial Position: The economic resources that a company controls, its financial structure, its liquidity and solvency, and its ability to adjust to changes in the environment in which it works all have an impact on its financial situation.

Providing Information about an Enterprise's Performance: Another crucial goal of the financial statements is to give information about an enterprise's performance, particularly its profitability, which is necessary to evaluate possible shifts in the financial resources that are likely to be in control in the future.

Providing Information on changes in Financial Situation: In order to evaluate an organization's investing, financing, and operating operations throughout the reporting period, the financial statements offer information about changes in the financial status of the business. The user may use this information to evaluate the firm's capacity to produce cash and cash equivalents as well as the requirements for using those cash flows.

3.4 NATURE OF FINANCIAL STATEMENTS

The financial statements provide a summary of the accounts of a business enterprise. According to The American Institute of Accountants, financial statements '*reflect a combination of recorded facts, accounting conventions and personal judgements and the judgements and conventions applied affect them materially*'. Thus, the data exhibited in financial statements are the results of the combined effect of (a) recorded facts; (b) accounting conventions; and (c) personal judgements used in the application of accounting conventions.

(a) Recorded Facts: The financial statements show the factual data drawn from the financial accounts. For example, items like cash in hand and at bank, cost of fixed assets, salaries paid, etc., are the facts recorded in the books.

(b) Accounting Conventions: Financial statements are affected to

a large extent by the various accounting concepts and conventions. For example, because of going concern concept, fixed assets are recorded at cost and not at their market value. Similarly, due to the convention of conservatism, the stock-in-trade is valued at cost or market price whichever is less.

(c) Personal Judgements: Although an accountant is guided by accounting concepts and conventions in preparing the financial statements, he has to exercise personal judgement in many cases, which affects the financial statements. For example, an accountant has to decide whether to use straight line method or written-down value method for depreciation of fixed assets. Similarly, an accountant has to make a judgement whether to provide 2% or 5% as provision for bad and doubtful debts.

The financial statements data is the result of the combined effect of the above three factors.

3.5 USERS OF FINANCIAL STATEMENT ANALYSIS

Information contained in financial statements is useful to different categories of users of financial data. These are managers, shareholders, creditors, Government, auditors and other interested groups. Uses of financial data for each of these are briefly described below:

1. **Management** of a company is interested in its financial condition, profitability and progress. It uses a number of methods, tools and techniques available to it to analyse the financial data. Such analysis is used by the management to exercise control over the business and to make decisions to run it more efficiently.
2. **Shareholders** are the suppliers of basic capital to run the business. Such capital is exposed to all the risks of ownership. Shareholders are interested in the profitability, dividends declared and market value of their holdings. The current earnings of the company determine both dividends and market value of the shares. In other words, shareholders mainly analyse the profitability and long-term solvency of the company.
3. **Creditors** include short-term creditors like bankers, trade creditors and also long-term credit grantors like debenture-holders and financial institutions, etc. All creditors are mainly interested in the short-term and long-term solvency of the company. They are also interested in the profitability because profit is viewed as the primary source for payment of interest on loans and debentures.

4. **Purchaser of Business:** Any person interested in the purchase of a going concern analyses the financial statements to determine its real value. It makes an assessment of the financial and operating strengths and weaknesses of the business.
5. **Government:** Financial statements are used by various government departments, like Income Tax, Sales Tax, Excise Duty, etc., to determine the tax liability of the company. On the basis of such financial statements of companies in different industries, the government determines tax policy, import-export policy and industry policy.
6. **Other Interested Groups:** Financial statement analysis also serves the needs of many other user groups. For example, workers' trade unions analyse the financial statements to prepare ground for collective bargaining, to claim bonus, etc.

3.6 SIGNIFICANCE OF FINANCIAL STATEMENT ANALYSIS

Financial statement analysis performs the essential function of converting mass data into useful information. Such analysed financial information serves many and varied purposes, as described below:

1. **Profitability** is a measure of the efficiency and success of a business enterprise. A company which earns profits at a higher rate is definitely considered a good company by the potential investors. The potential investors analyse the financial statements to judge the profitability and earning capacity of a company so as to decide whether to invest in a company or not.
2. **Liquidity** of a business refers to its ability to pay off its short-term liabilities, when they become due. Short-term creditors, like trade creditors and bankers, make an assessment of liquidity before granting credit to the company.
3. **Solvency** refers to the ability of a company to meet its long-term debts. Long-term creditors, like debenture-holders and financial institutions, judge the solvency of a company before any lending decisions. They analyse company's profitability over a number of years and its ability to generate sufficient cash to be able to repay their claims.
4. **Efficiency of Management and Performance** of a company can be easily judged by analysing its financial statements. Profitability of a company is not the only measure of company's managerial efficiency. There are a number of other ways to

judge the operational efficiency of management. Financial analysis tells whether the resources of the business are being used in the most effective and efficient way.

5. **Inter-firm Comparison:** A comparative study of financial and operating efficiency of different firms is possible only after proper analysis of their financial statements. For this purpose, it is also necessary that the financial statements are maintained on a uniform basis so that financial data of various firms are comparable.
6. **Forecasting and Budgeting:** Financial analysis is the starting point for making plans by forecasting and preparing budgets. Analysis of the financial statements of the past years helps a great deal in forecasting for the future.

3.7 LIMITATIONS OF FINANCIAL STATEMENTS

It is a general impression that financial statements are precise, exact and final. But sometimes these statements conceal some very important information. As such they suffer from certain limitations. These are discussed below:

1. **Effect of accounting concepts and conventions:** Various concepts and conventions of accounting affect the values of assets and liabilities, as shown in the Balance Sheet. Similarly profit or loss disclosed by Profit and Loss Account is also affected by these concepts and conventions.
2. **Effect of personal judgements:** The financial statements are influenced, to a certain extent, by the personal judgements of the accountant. For example, the amount of provision for bad and doubtful debts depends entirely on the judgement and past experience of the accountant. Similarly, an accountant has also to make a judgement about the method and rate of depreciation for fixed assets. There are numerous instances when an accountant has to exercise his personal judgement in which there is an element of subjectivity. The quality of the financial statements thus depends upon the competence and integrity of those who are responsible for preparing these statements.
3. **Recording only monetary transactions:** financial statements record only those transactions and events which can be expressed in terms of money. But there are many factors which are qualitative in nature and cannot be expressed in monetary terms. These non-monetary factors do not find any place in the financial statements. For example, efficiency and

loyalty of workers, personal reputation and integrity of the managing director of the company, advertisement policy of the company, etc., are not capable of being expressed in money terms and thus find no place in financial statements even though they materially affect the profitability of a business.

4. **Historical in nature:** Financial statements disclose data which is basically historical in nature, i.e., it tells what has happened in the past. These statements do not give future projections.
5. **Ignores human resources:** No business can prosper without an efficient work force. But financial statements do not include human resources which is a very important asset for a business.
6. **Ignores social costs:** Apart from earning a fair return on investments, a business has certain social responsibilities. Financial statements do not make any attempt to show the social cost of its activities. Examples of social cost of a manufacturing company are air pollution, water pollution, occupational diseases, work injuries, etc.

3.8 PRINCIPAL TOOLS OF ANALYSIS

Meaning of Analysis and Interpretation

Analysis of financial statements means to critically examine the composition of an item or amount appearing in the financial statements. In other words, analysis means breaking up of an amount into its elements so that a particular element may be correlated to another and significant relationship may be established between them and conclusions may be drawn on the data presented in financial statements. Such an analysis makes use of various analytical tools and techniques to data of financial statements so as to derive from them certain relationships that are significant and useful for decision making. In the words of John N Myers, '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 these factors as shown in a series of statements.'

Interpretation is determining the meaning and drawing inference or conclusions with regard to the results of significant relationship between the items correlated.

Thus, 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 using various techniques, such as ratio analysis, comparative statements, etc. Such analysed information is used by management, bankers,

creditors, investors and others to form judgement about the operating performance and financial position of the business. Thus, financial statement analysis helps in evaluating a business performance according to some specific objectives.

Financial statements should be rearranged for analysis in order to make interfirm comparisons and to show the relative importance and impact of different data items in respect to time periods. Logical relationships should be taken into account while rearranging the data. The following techniques are applied while analysing financial statements:

- I. **Comparative Financial Statements**
- II. **Common-size Financial Statements**
- III. **Trend Percentages**
- IV. **Ratio Analysis**
- V. **Horizontal and Vertical Analysis**

In horizontal analysis, financial data of two or more years of the company is presented horizontally in a number of columns in comparative form. *Comparative financial statements* and *trend percentages* are types of horizontal analysis.

Vertical analysis covers a period of only one year and analysis is made on the basis of one set of financial statements. *Common size financial statements* and *ratio analysis* are the techniques employed in vertical analysis.

I. COMPARATIVE FINANCIAL STATEMENTS

One of the key instruments for horizontal financial statement analysis is financial statement comparison. It has been observed that the two most crucial financial statements are the balance sheet and the profit and loss account. These financial accounts include very valuable and significant information for a certain year. However, such information becomes more useful if it is compared with the data shown in the financial statements of the previous years. This type of financial statement comparison is achieved by placing the balance sheet and profit and loss account of two or more years side by side and examining the variations in the data over time.

Thus, comparison of financial statements means that the financial statements of a company for any year are compared with financial statements of the same company for earlier years. **Comparative financial statements** take the form of comparative balance sheets and comparative profit and loss accounts.

Financial Statement Analysis

Financial statements of two or more firms can also be compared for drawing inferences. This is called 'interfirm comparison'.

Advantages: The comparative financial statements are useful for analysis of the following:

- Comparative statements assist the analyst to determine the company's performance by showing trends in sales, manufacturing costs, profits, etc.
- Comparative statements can also be used to compare a company's performance to the industry average or other firms. This aids in identifying the firm's weaknesses so that appropriate corrective action can be performed.

Disadvantages: The comparative financial statements suffer from the following weaknesses:

- Interfirm comparisons may be misleading if the firms differ in terms of size, age, and accounting practices, such as inventory valuation and depreciation.
- Comparing different periods might also be misleading if there have been changes in accounting practices, inflation, recessions, etc.

Steps to perform Comparative Statement Analysis:

Step 1: Calculating Change in INR/Rupee Amounts

Rupee Change (₹) = Current Year Figure – Base Year Figure

If we measure the amount of the change between 2024 and 2025, the Rupee amounts for 2024 become the "base" year figures. Thus, the previous year will become the base year.

Step 2: Calculating Change as a Percentage

$$\text{Percentage Change} = \frac{\text{Rupee Change}}{\text{Base Year Figure}} \times 100$$

Comparative Balance Sheet

A comparative balance sheet has two columns for the data of the original balance sheets. A third column is prepared to show the increases and decreases in rupees in various assets and liabilities. A fourth column is generally added to show percentages of increases and decreases. Thus, there are generally total four columns in a comparative balance sheet.

ILLUSTRATIONS

Illustration 1

From the following information prepare a Comparative Balance Sheet:

Particulars	31 March, 2024 (₹)	31 March, 2025 (₹)
Equity Share Capital	4,00,000	6,00,000
Debentures	2,00,000	3,25,000
Sundry Creditors	2,55,000	1,17,000
Bank Overdraft	7,000	10,000
Total Liabilities and Capital	8,62,000	10,52,000
Plant and Machinery	1,00,000	2,00,000
Land and Building	3,60,000	5,40,000
Investments	2,70,000	1,70,000
Sundry Debtors	1,00,000	88,000
Cash in hand	32,000	54,000
Total Assets	8,62,000	10,52,000

Solution:

Comparative Balance Sheet

Particulars	2024 (₹)	2025 (₹)	Change Absolute (₹)	% Change
Equity Share Capital	4,00,000	6,00,000	2,00,000	50
Debentures	2,00,000	3,25,000	1,25,000	62.50
Sundry Creditors	2,55,000	1,17,000	(1,38,000)	(54.12)
Bank Overdraft	7,000	10,000	3,000	42.86
Total Liabilities and Capital	8,62,000	10,52,000	1,90,000	22.04
Plant and Machinery	1,00,000	2,00,000	1,00,000	100
Land and Building	3,60,000	5,40,000	1,80,000	50
Investments	2,70,000	1,70,000	(1,00,000)	(37.04)
Sundry Debtors	1,00,000	88,000	(12,000)	(12)
Cash in hand	32,000	54,000	22,000	40.74
Total Assets	8,62,000	10,52,000	1,90,000	22.04

Illustration 2

Following is the Balance Sheets of Threadline Ltd. for the years 2023 and 2024. Prepare a Comparative Balance Sheet and explain the financial position of the concern.

Balance Sheets as on 31st March (₹)

Liabilities	2023	2024	Assets	2023	2024
Share Capital	3,00,000	4,00,000	Land & Buildings	1,85,000	1,35,000
Reserves & Surplus	1,65,000	1,11,000	Plant & Machinery	2,00,000	3,00,000
Debentures	1,00,000	1,50,000	Furniture & Fixtures	10,000	12,500
Long Term Loan	75,000	1,00,000	Other Fixed Assets	12,500	15,000
Bills Payable	25,000	22,500	Cash at Bank	10,000	40,000
Creditors	50,000	60,000	Bills Receivable	75,000	46,000
Other Current liabilities	2,500	5,000	Debtors	1,00,000	1,25,000
			Stock	1,25,000	1,75,000
Total	7,17,500	8,48,500	Total	7,17,500	8,48,500

Solution:

Comparative Balance Sheet of Threadline Ltd. for the years ending 31st March 2023 & 2024

Particulars	2023 (₹)	2024 (₹)	Change Absolute (₹)	% Change
Liabilities and Capital:				
Equity Share Capital	3,00,000	4,00,000	1,00,000	33
Reserves & Surplus	1,65,000	1,11,000	(54,000)	(32.73)
Total Equity	4,65,000	5,11,000	46,000	9.89
Debentures	1,00,000	1,50,000	50,000	50
Long term Loans	75,000	1,00,000	25,000	33
Current Liabilities:				
Bills Payable	25,000	22,500	(2,500)	(10)
Creditors	50,000	60,000	10,000	20
Other Current Liabilities	2,500	5,000	2,500	100
Total Current Liabilities	77,500	87,500	10,000	12.9
Total Liabilities	2,52,500	3,37,500	85,000	33.66
Total	7,17,500	8,48,500	1,31,000	18.26
Current Assets:				
Cash at Bank	10,000	40,000	30,000	300
Bills Receivable	75,000	46,000	(29,000)	(39)
Debtors	1,00,000	1,25,000	25,000	25
Stock	1,25,000	1,75,000	50,000	40
Total Current Assets (a)	3,10,000	3,86,000	76,000	24.52
Fixed Assets:				
Land & Buildings	1,85,000	1,35,000	(50,000)	(27.03)
Plant & Machinery	2,00,000	3,00,000	1,00,000	50
Furniture & Fixtures	10,000	12,500	2,500	25
Other Fixed Assets	12,500	15,000	2,500	20
Total Fixed Assets (b)	4,07,500	4,62,500	55,000	13.49
Total Assets (a) + (b)	7,17,500	8,48,500	1,31,000	18.26

Interpretation

(1) In the comparative balance sheet of the company in 2024 shows an increase in fixed assets of ₹ 55,000 (13.49%) where as long term liabilities and share capital showed an increase of ₹ 75,000 and ₹ 1,00,000 respectively. So, the company purchased fixed assets out

of long-term funds. So, there will be no change in the working capital.

(2) Current assets showed an increase of 24.52% and cash ₹ 30,000 (300%) stock also increased by ₹ 50,000. Current liabilities showed an increase of ₹ 10,000 (12.9%). So, the company acquired current assets from long-term fund. The liquidity position improved considerably.

(3) Reserves and surplus were decreased by ₹ 54,000 (32.7%). So, the company might have utilised the reserve for the issue of bonus shares or for the payment of dividends.

The overall position of the company is satisfactory.

Comparative Income Statement (Profit and Loss Account)

An income statement shows the net profit or net loss resulting from the operation of a business for a definite period of time. A comparative income statement is prepared to show the net profit or loss for a number of years in comparative form. By comparing income statement for two or more years, it is possible to observe the progress of a business.

A comparative income statement contains the same columns as the comparative balance sheet and provides the same type of information.

Illustration 3

From the following information prepare a Comparative Income Statement:

Particulars	31-3-2024 (₹)	31-3-2025 (₹)
Sales	10,00,000	8,00,000
Cost of Goods Sold	6,00,000	4,00,000
Adm. Selling and Distribution Expenses	2,00,000	1,40,000
Other Incomes	40,000	20,000
Income Tax	1,20,000	1,40,000

Solution:

Comparative Income Statement for two years 2024 and 2025

Particulars	2024 (₹)	2025 (₹)	Change Absolute (₹)	% Change
Sales	10,00,000	8,00,000	(2,00,000)	(20.00)
Less: Cost of Goods Sold	6,00,000	4,00,000	(2,00,000)	(33.33)
Gross Profit	4,00,000	4,00,000	Nil	Nil
Less: Operating Expenses:				

Adm., Selling and Dist. Exp.	2,00,000	1,40,000	(60,000)	(30.00)
Net Operating Profit	2,00,000	2,60,000	60,000	30.00
Other Incomes	40,000	20,000	(20,000)	(50.00)
Net Profit before tax	2,40,000	2,80,000	40,000	16.67
Less: Income Tax (50% of Net Profit)	1,20,000	1,40,000	20,000	16.67
Net Profit after Income Tax	1,20,000	1,40,000	20,000	16.67

Illustration 4

From the following particulars pertaining to Wish Ltd. you are required to prepare a comparative Income Statement and interpret the changes:

Particulars	2024 (₹)	2025 (₹)
Sales	58,000	65,200
Cost of Goods Sold	47,600	49,200
Administration Expenses	1,016	1,000
Selling Expenses	1,840	1,920
Non-operating Expenses	140	155
Non-operating Incomes	96	644
Sales Returns	2,000	1,200
Tax rate	43.75%	43.75%

Comparative Income Statement of Wish Ltd. for the years 2024 and 2025

Particulars	2024 (₹)	2025 (₹)	Change Absolute (₹)	% Change
Sales	58,000	65,200	7,200	12.41
Less: Returns	2,000	1,200	(800)	(40.00)
Net Sales	56,000	64,000	8,000	14.29
Less: Cost of Goods Sold	47,600	49,200	1,600	3.36
Gross Profit (a)	8,400	14,800	6,400	76.19
Less: Operating Expenses				
Administration Expenses	1,016	1,000	(16)	(1.57)
Selling Expenses	1,840	1,920	80	4.35
Total Operating				

Financial Statement Analysis

Expenses (b)	2,856	2,920	64	81
Operating Profit (a) - (b)	5,544	11,880	6,336	2.24
Add: Non-Operating Incomes	96	644	548	114.29
	5,640	12,524	6,884	570.83
Less: Non-Operating Expenses	140	155	15	122.06
Net Profit before Tax	5,500	12,369	6,869	1071
Less: Tax	2,406	5,411	3,005	124.89
Net Profit after Tax	3,094	6,958	3,864	124.90
				124.89

Interpretation

(1) There is a modest increase in sales. While gross sales have increased, returns have come down by 40%, which is a healthy sign. It points towards increased acceptability of the company's products and customer satisfaction.

(2) The rate of growth of sales is considerably higher than the rate of growth of cost of goods sold. This has resulted in a handsome rise in gross profit of the company.

(3) There is a marginal fall in administration expenses and a marginal rise in selling expenses, which do not affect the overall financial position of the company significantly.

(4) There is an abnormally high rise in non-operating income. However, it can be attributed to the low base of the previous year. The increase in operating profit without considering the non-operating income has been impressive.

(5) The net profit before and after tax have increased at the same rate, since the tax rate applicable to both the years is the same. Both the figures have doubled in 2025.

(6) The overall profitability of the company is more than satisfactory.

II. COMMON-SIZE FINANCIAL STATEMENTS

Common size statement or common-size financial statement is a type of comparative financial statement in which each item of the financial statement is expressed as a percentage of the appropriate total. The appropriate total is taken as 100 per cent and each item is shown as a proportion of this 100 per cent. Such a statement is also known as *100 per cent Statement* or *Vertical analysis*. A common size statement may be prepared for balance sheet as well as income statement.

Common Size Balance Sheet

In common size balance sheet, each item of asset is shown as a percentage of total assets and each item of liability and capital is shown as a percentage of total liabilities and capital (which is the same as total assets). In other words, the total of the assets and also that of liabilities and capital is taken as 100 per cent and each item appearing on the assets side as well as liabilities side is shown as a proportion of the total of 100.

These statements are useful for evaluating the performance of the business by considering each component separately in comparison to the overall numbers presented. These statements also make it easier to assess performance over a number of years and enable comparisons with data from peer companies in the sector, which helps with the analysis of relative efficiency.

Illustration 5

With reference to Illustration 1, Common Size Balance Sheet is prepared as follows:

Solution:

Common Size Balance Sheet

Particulars	2024 (₹)	2024% of Total	2025 (₹)	2025% of Total
Equity Share Capital	4,00,000	46.40	6,00,000	57.03
Debentures	2,00,000	23.20	3,25,000	30.89
Sundry Creditors	2,55,000	29.58	1,17,000	11.13
Bank Overdraft	7,000	0.82	10,000	0.95
Total Liabilities and Capital	8,62,000	100	10,52,000	100
Plant and Machinery	1,00,000	11.60	2,00,000	19.01
Land and Building	3,60,000	41.76	5,40,000	51.33
Investments	2,70,000	31.32	1,70,000	16.16
Sundry Debtors	1,00,000	11.60	88,000	8.37
Cash in hand	32,000	3.72	54,000	5.13
Total Assets	8,62,000	100	10,52,000	100

Procedure of Preparing Common Size Balance Sheet

Assume total of the balance sheet as 100 per cent. Then express each item in the balance sheet as a percentage of total of 100. For example, in the above Illustration, equity capital on 31 March 2020 is ₹ 4,00,000. Total of the balance sheet on this date is ₹ 8,62,000.

Financial Statement Analysis

We can now calculate percentage of equity capital in the total of 100 per cent as follows:

$$\text{Equity Capital} = \frac{4,00,000}{8,62,000} \times 100 = 46.40\%$$

Similarly, calculation of other items in the balance sheet is made. For example:

$$\text{Debentures} = \frac{2,00,000}{8,62,000} \times 100 = 23.20\%$$

$$\text{Plant and Machinery} = \frac{1,00,000}{8,62,000} \times 100 = 11.60\%$$

As on 31 March 2021, each item is calculated as a percentage of ₹ 10,52,000. For example:

$$\text{Equity Capital} = \frac{6,00,000}{10,52,000} \times 100 = 57.03\%$$

$$\text{Land and Building} = \frac{5,40,000}{10,52,000} \times 100 = 51.33\%$$

In this way each and every item is calculated.

Particulars	2024 (₹)	2023 (₹)	2022 (₹)
Equity Capital	4,00,000	4,00,000	4,00,000
Debentures	2,00,000	2,00,000	2,00,000
Plant and Machinery	1,00,000	1,00,000	1,00,000
Land and Building	5,40,000	5,40,000	5,40,000
Current Assets	32,000	32,000	32,000
Current Liabilities	1,00,000	1,00,000	1,00,000
Long-term Liabilities	2,52,000	2,52,000	2,52,000
Bank Overdraft	7,000	7,000	7,000
Total Liabilities and Capital	8,62,000	8,62,000	8,62,000
Equity Capital	4,00,000	4,00,000	4,00,000
Debentures	2,00,000	2,00,000	2,00,000
Plant and Machinery	1,00,000	1,00,000	1,00,000
Land and Building	5,40,000	5,40,000	5,40,000
Current Assets	32,000	32,000	32,000
Current Liabilities	1,00,000	1,00,000	1,00,000
Long-term Liabilities	2,52,000	2,52,000	2,52,000
Bank Overdraft	7,000	7,000	7,000
Total Liabilities and Capital	8,62,000	8,62,000	8,62,000

Illustration 6

Given below are the Balance Sheets of Vivek Limited as on 31st March, 2024 and 2025. (In ₹ '000)

Liabilities	31-3-2024	31-3-2025	Assets	31-3-2024	31-3-2025
Equity Share Capital	1,200	1,200	Fixed Assets	5,640	6,050
Pref. Share Capital	600	600	Less: Depreciation	3,510	3,760
Reserves & Surplus	1,800	2,150	Net Block	2,130	2,290
Debentures	400	400	Investments	150	350
Loan (within one year)	1,470	1,310	Cash & Bank	730	730
Creditors	3,190	3,300	Debtors	1,660	1,950
Provision	630	690	Stock	3,840	3,550
Total	9,290	9,650	Other Current Assets	780	780
			Total	9,290	9,650

Financial Statement Analysis

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You are required to prepare common size balance sheets in a form suitable for analysis and interpret the same.

Solution:

Common-size Balance Sheets of Vivek Ltd. for the years ending 31.3.2024 and 31.3.2025 (In ₹ '000)

Particulars	31-3-2024		31-3-2025	
	(₹)	% of Total	(₹)	% of Total
Capital & Reserves:				
Equity share capital	1,200	12.9	1,200	12.4
Preference share capital	600	6.5	600	6.2
Reserves and surplus	1,800	19.4	2,150	22.3
	3,600	38.8	3,950	40.9
Long-term debts:				
Debentures	400	4.4	400	4.1
Current Liabilities:				
Loan	1,470	15.8	1,310	13.6
Creditors	3,190	34.3	3,300	34.2
	4,660	50.1	4,610	47.8
Provisions	630	6.7	690	7.2
Total Liabilities	9,290	100	9,650	100
Fixed Assets:				
Net block	2,130	23.0	2,290	23.7
Investments	150	1.6	350	3.6
Current Assets:				
Cash and bank balances	730	7.8	730	7.6
Debtors	1,660	17.8	1,950	20.2
Stock	3,840	41.3	3,550	36.7
Other current assets	780	8.5	780	8.0
	7,010	75.4	7,010	72.7
Total Assets	9,290	100	9,650	100

Interpretation

- (1) There is no change in the current assets in 2025 but current liabilities were decreased.
- (2) The current assets are more than the current liabilities. So, the company's solvency position is good.
- (3) There is no change in the cash position.

- (4) The fixed assets were increased by ₹ 1,60,000 (0.7%). It may be assumed that fixed assets were purchased from working capital.
- (5) The overall financial position of the company is good.

Common Size Income Statement

This statement is similar to common size balance sheet. In the common size income statement, total sales figure is taken as 100 per cent and each item is then calculated as a percentage of sales.

Illustration 7

Use the data given in Illustration 3 to prepare a Common Size Income Statement.

Solution:

Common Size Income Statement

Particulars	2024 (₹)	2024 % of Sales	2025 (₹)	2025 % of Sales
Sales	10,00,000	100.00	8,00,000	100.00
Less: Cost of Goods Sold	6,00,000	60.00	4,00,000	50.00
Gross Profit	4,00,000	40.00	4,00,000	50.00
Less: Operating Expenses	2,00,000	20.00	1,40,000	17.50
Net Operating Profit	2,00,000	20.00	2,60,000	32.50
Other Incomes	40,000	4.00	20,000	2.50
Net Profit before tax	2,40,000	24.00	2,80,000	35.00
Less: Income Tax (50% of net profit)	1,20,000	12.00	1,40,000	17.50
Net Profit after tax	1,20,000	12.00	1,40,000	17.50

Procedure of Preparing Common Size Income Statement

Total net sales figure is taken as 100% and then each item appearing in the income statement is taken as a percentage of sales. For example, in the above illustration, sales of ₹ 10,00,000 in the year 2024 are taken as 100 per cent. Then cost of sales is calculated as a percentage of sales as follows:

$$\frac{\text{Cost of goods sold}}{\text{Sales}} \times 100 = \frac{6,00,000}{10,00,000} \times 100 = 60\%$$

$$\text{Gross Profit as a \% of sales} = \frac{4,00,000}{10,00,000} \times 100 = 40\%$$

Calculations for other items of the years 2024 and 2025 are similarly made.

Illustration 8

The following is the income statement of a XYZ Ltd. for the years 2024 and 2025. Convert them into Common-size Income Statement and comment on the profitability.

Income Statement of XYZ Ltd. for the year ending 31st March

Particulars	2024 (₹)	2025 (₹)	Particulars	2024 (₹)	2025 (₹)
To, Cost of goods sold	11,90,000	12,30,000	By, Gross sales	14,50,000	16,30,000
To, Administration expenses	25,400	25,000	Less: Returns	50,000	30,000
To, Selling expenses	46,000	48,000	By, Net sales	14,00,000	16,00,000
To, Interest	3,500	3,880	By, Interest and dividends	2,400	16,100
To, Net Profit	1,37,500	3,09,220			
Total	14,02,400	16,16,100	Total	14,02,400	16,16,100

Solution:

Particulars	2024 (₹)	2024 (%)	2025 (₹)	2025 (%)
Net Sales	14,00,000	100.00	16,00,000	100.00
Less: Cost of goods sold	11,90,000	85.00	12,30,000	76.88
Gross Profit (a)	2,10,000	15.00	3,70,000	23.12
Operating expenses:				
Administration expenses	25,400	1.81	25,000	1.56
Selling expenses	46,000	3.29	48,000	3.00
Total Operating expenses (b)	71,400	5.10	73,000	4.56
Operating Profit (a) - (b)	1,38,600	9.90	2,97,000	18.56
Add: Non-operating income	2,400	0.17	16,100	1.00
	1,41,000	10.07	3,13,100	19.56
Less: Non-operating expenses and interest	3,500	0.25	3,880	0.24
Net Profit	1,37,500	9.82	3,09,220	19.32

Interpretation

(1) The cost of goods in the year 2024 was 85%. It was reduced to 76.88% in 2025 and as a result the gross profit increased from 15% in 2024 to 23.12% in 2025.

(2) The operating expenses were decreased from 5.1% in 2024 to 4.56% in 2025. So, the operating profit shows an increase.

(3) The net profit in 2024 was 9.82% to 19.32% in 2025. The net profit actually doubled during period. The profitability of the concern is satisfactory.

III. TREND ANALYSIS

Trend Analysis is a statistical technique that tries to determine future movements of a given variable by analysing historical trends. In other words, it is a method that aims to predict future behaviours by examining past ones.

Trend Analysis Guidelines

- The trend ratios should be calculated only for the items which have a logical relationship with one another.
- The financial statements of one financial year should be selected as a base statement, and financial items of that year should be assigned a value of 100.
- Then, trend ratios of subsequent years' financial statements are calculated by applying the following formula:

Financial Statement Analysis

Trend Ratio =

$$\frac{\text{Absolute Figure of Financial statement under study}}{\text{Absolute Figure of same item in base financial statement}} \times 100$$

- Tabulate the trend ratios for analysis of the trend over a period
- The trend ratio is calculated for major financial items in the financial statements to arrive at conclusions for important changes. External factors such as government policies, economic situations, shifts in the distribution of income, technological advancements, population expansion, shifts in habits and tastes, etc., may occasionally have an impact on the trend. Trend analysis is a straightforward method that doesn't require laborious computations.

Trend Ratio study the financial statements of a company over a number of years. In other words, it is an extension of horizontal analysis to several years. 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. This means, when an item is expressed as 100, all other values expressed in term of the base year will reflect in trend upward or downward, in relation to 100. Any year may be taken as the base but generally the starting or initial year is taken as the base year.

Trend Ratio may be used for both Balance Sheet and Profit and Loss Account.

Advantages

- Trend Ratio analysis is of immense use in making a comparative analysis over a series of years.
- It is easy to identify changes and interpret the same because percentage figures disclose more than the absolute figures.

Limitations

The analysis through trend ratios is subject to the following limitations:

- The trend ratios are incomparable if there is inconsistency in accounting policies and practices.
- The price level changes are represented in trend ratios.
- The trend ratios must be studied along with absolute data for correct analysis.
- While analysing the trend ratios, non-financial data should also be considered; otherwise, conclusions would be misleading.

Illustration 9

From the following information, interpret the results of operations of a manufacturing concern using Trend Ratios. Use 2021 as the base.

Particulars	2021 (₹)	2022 (₹)	2023 (₹)
Sales	50,000	75,000	1,00,000
Purchases	40,000	60,000	72,000
Expenses	5,000	8,000	15,000
Profit	5,000	7,000	13,000

Solution:

Particulars	2021 (₹)	2022 (₹)	2023 (₹)	2021 (%)	2022 (%)	2023 (%)
Sales	50,000	75,000	1,00,000	100	150	200
Purchases	40,000	60,000	72,000	100	150	180
Expenses	5,000	8,000	15,000	100	160	300
Profit	5,000	7,000	13,000	100	140	260

Working:

Sales - Base year - 2021

For 2022 Sales growth = $\frac{75,000}{50,000} \times 100 = 150\%$

For 2023 Sales growth = $\frac{1,00,000}{50,000} \times 100 = 200\%$

Purchases

Base year - 2021

For 2022 Purchases growth = $\frac{60,000}{40,000} \times 100 = 150\%$

For 2023 Purchases growth = $\frac{72,000}{40,000} \times 100 = 180\%$

Expenses

Base year - 2021

For 2022 Expenses growth = $\frac{8,000}{5,000} \times 100 = 160\%$

For 2023 Expenses growth = $\frac{15,000}{5,000} \times 100 = 300\%$

Profit

Base year – 2021

$$\text{For 2022 Profit growth} = \frac{7,000}{5,000} \times 100 = 140\%$$

$$\text{For 2023 Profit growth} = \frac{13,000}{5,000} \times 100 = 260\%$$

Illustration 10

From the following data, calculate trend percentages (2021 as the base):

Particulars	2021	2022	2023
Cash	200	240	160
Debtors	400	500	650
Stock	600	800	700
Other current assets	450	600	750
Land	800	1,000	1,000
Buildings	1,600	2,000	2,400
Plant	2,000	2,000	2,400

Solution:

Assets	2021 (₹)	2022 (₹)	2023 (₹)	2021 (%)	2022 (%)	2023 (%)
Current Assets						
Cash	200	240	160	100	120	80
Debtors	400	500	650	100	125	163
Stock	600	800	700	100	133	117
Other current assets	450	600	750	100	133	167
Total Current Assets	1,650	2,140	2,260	100	130	137
Fixed Assets						
Land	800	1,000	1,000	100	125	125
Buildings	1,600	2,000	2,400	100	125	150
Plant	2,000	2,000	2,400	100	100	120
Total Fixed Assets	4,400	5,000	5,800	100	114	132

IV. RATIO ANALYSIS

One of the most effective and widely utilized methods for analysing and interpreting financial statements is Ratio Analysis. It focuses on how the numbers in the financial accounts relate to one another. Ratio analysis is useful for analysing a company's historical performance and forecasting its future. Ratio analysis enables interested parties to assess specific facets of a company's performance, including shareholders, investors, creditors, the government, and analysts.

For analysis and decision-making, the accounting ratios provide a quantifiable link. It offers a foundation for both intra- and inter-firm comparisons. Only when the ratios are compared to base period ratios, industry ratios, or standards will they be useful.

The ratio analysis concentrates on the interrelationship among the figures appearing in the financial statements. The ratio analysis helps the management to analyse the past performance of the firm and to make further projections.

Ratios normally pinpoint a business firm's strengths and weakness in two ways:

- Ratios provide an easy way to compare present performance with past.
- Ratios depict the areas in which a particular business is competitively advantaged or disadvantaged through comparing ratios to those of other businesses of the same size within the same industry.

1. Meaning of Ratio and Ratio Analysis

A ratio is simply one number expressed in terms of another number. In other words, a ratio expresses mathematical relationship between one number and another. For example, the ratio of 200 to 100 is expressed as 2:1 or as 2. Thus, a ratio is calculated by dividing one figure into another.

Example: Gross Profit = ₹ 20,000 Sales = ₹ 1,00,000

Ratio of gross profit to sales = $\frac{\text{Gross Profit}}{\text{Sales}} = \frac{20,000}{1,00,000} = 0.2:1$ or simply as 0.2 or 20%

Certain ratios between two numbers covering a definite period of time are expressed as a rate, e.g., stock turnover is five times a year.

An accounting ratio shows the mathematical relationship between two figures which have meaningful relation with each other, e.g.,

gross profit and sales, net profit and sales, current assets and current liabilities, etc.

In financial analysis, a ratio is used as an index or yardstick for evaluating the financial performance of a firm. The absolute accounting figures contained in the financial statements may not be very meaningful.

For example, a profit of Rs. 5,00,000 may look impressive. But the performance of the firm cannot be judged without comparing this net profit figure with the total amount invested to earn this profit. If this profit of Rs. 5 lakhs have been earned on an investment of Rs. 1 crore, then the ratio of net profit to total capital employed is only $(5 \text{ lakh} \div 1 \text{ crore}) \times 100 = 5\%$ which is not a reasonable return on capital employed.

On the other hand, if the same profit of Rs. 5 lakhs are earned on an investment of Rs. 20 lakhs, the ratio of return on capital invested is $(5 \text{ lakh} \div 20 \text{ lakh}) \times 100 = 25\%$ which looks quite impressive and much better than 5% which is the earlier situation. This is because greater the rate of return on capital employed, the higher is the firm's rate of profitability.

2. Interpretation of Ratios

(1) **Comparison with Ideal Ratio:** No single ratio may be used to derive any conclusions. It should be compared to a commonly accepted optimum ratio. For instance, a company's current ratio is determined to be 1.5:1. The management is not guided by this ratio when it comes to its liquid position. However, it is widely accepted in the financial community that a current ratio of 2:1 is optimal. This is regarded as the optimum ratio, and comparing the actual ratio of the aforementioned firm to this ratio will show that it is unsatisfactory. Every kind of business has a set of ideal ratios that are used to compare the ratios of individual firms and draw practical conclusions.

(2) **Comparison with Previous Ratios:** A company's current ratio can reveal a pattern when compared to its previous ratios. It will demonstrate if the company's performance and financial situation have improved, declined, or stayed the same. If necessary, this will assist management in implementing corrective actions. Additionally, the company can calculate its average ratio for the previous three to five years and compare it to the industry average.

(3) **Assistance of Some Related Ratios:** If some related ratios are taken into account, the analysis and interpretation of some ratios may become more significant. Assume that a company's current

ratio is 2:1, indicating a comfortable liquid position. However, it will provide a very clear picture of the business's liquidity when both liquid ratio and acid test ratio considered together. Because there is a lot of stock in the current assets, it is possible that the current ratio will show a suitable liquid position; nevertheless, this could indicate that sales are moving very slowly and that the liquid position is not as comfortable as it seems. When combined with the current ratio, the liquid ratio provides a clear picture of the liquidity.

(4) **Comparison with Ratios of Other Companies:** It is helpful to compare a company's ratios with those of other companies operating in the same industry. This comparison reveals the strengths and weaknesses of the company's performance and position. The comparison is helpful because businesses in the same sector deal with similar issues. For example, if the textile industry's overall gross profit ratio is 20% and a specific company's G.P. is, say, 15%, it indicates an unacceptable situation.

3. Classification of Ratios

Ratios may be classified as given on the next page:

Classification According to the Nature of Accounting Statement from which the Ratios are Derived. These are:

1. **Balance Sheet Ratios** These ratios deal with the relationship between two items appearing in the balance sheet, e.g., current ratio, liquid ratio, debt-equity ratio, etc.
2. **Profit and Loss Account Ratios** This type of ratios show the relationship between two items which are in the profit and loss account itself, e.g., gross profit ratio, net profit ratio, operating ratio and stock turnover ratio.
3. **Combined or Composite Ratios** These ratios show the relationship between items one of which is taken from Profit and Loss Account and the other from the Balance Sheet, e.g., Rate of return on capital employed, debtor's turnover ratio, stock turnover ratio and capital turnover ratio.

Classification from the Point of View of Financial Management or Objective These are:

1. **Liquidity Ratios** to test the ability of a firm to meet its current liabilities.
2. **Capital Structure Ratios** to test the long-term solvency of a firm.

3. **Turnover Ratios** to indicate the efficiency with which assets are utilized.

4. **Profitability Ratios** to measure the efficiency of a business.

1. LIQUIDITY RATIOS (Short-term Solvency)

'Liquidity' means ability of a firm to meet its current liabilities. The liquidity ratios, therefore, try to establish a relationship between current liabilities, which are the obligations soon becoming due and current assets, which presumably provide the source from which these obligations will be met. In other words, the liquidity ratios answer the question: 'Will the company probably be able to meet its obligations when they become due?'

The failure of a company to meet its obligations due to lack of adequate liquidity will result in bad credit ratings, loss of creditor's confidence or even in law suits against the company. The following ratios are commonly used to indicate the liquidity of business.

Important Liquidity Ratios

- i. Current Ratio
- ii. Liquid Ratio/ Quick Ratio

i. Current Ratio (Working Capital Ratio)

This ratio is most commonly used to perform the short-term financial analysis. Also known as the working capital ratio, this ratio matches the current assets of the firm to its current liabilities.

Formula:

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

Current Assets Current assets include: (a) Cash in hand and at bank, (b) Readily marketable securities, (c) Bills Receivable, (d) Debtors less provision for bad and doubtful debts, (e) Stock in trade, (f) Prepaid expenses, (g) Any other asset, which, in the normal course of business, will be converted in cash in a year's time.

Current Liabilities These include all obligations maturing within a year, such as: (a) Sundry Creditors (b) Bills Payable (c) Bank Overdraft (d) Income Tax Payable (e) Dividends Payable (f) Outstanding expenses (g) Provision for taxation (h) Unclaimed dividends.

Significance and Objective of Current Ratio The current ratio provides useful insight into the short-term financial situation and strategy. It is a measure of a company's capacity to pay its short-term obligations on time. A relatively high current ratio indicates that the firm is liquid and has the ability to meet its current

liabilities. Conversely, a comparatively low current ratio suggests that the company will struggle to make its payments.

Normally a current ratio of 2:1 is considered satisfactory. In other words, current assets should be twice the amount of current liabilities. If the current ratio is 1:1, it means that funds yielded by current assets are just sufficient to pay the amounts due to various creditors and there will be nothing left to meet the expenses which are being currently incurred. Thus, the ratio should always be more than 1:1. A very high current ratio is also not desirable because it indicates idleness of funds which is not a sign of efficient financial management.

The following is the Balance Sheet of Bharat Manufacturing Co. Ltd, as on 31st March, 2023:

Liabilities	(₹)	Assets	(₹)
Equity Capital	48,000	Plant and Machinery	90,000
Profit and Loss A/c	12,000	Sundry Debtors	18,000
Debentures	30,000	Stock	24,000
Sundry Creditors	46,800	Cash at Bank	4,560
Taxation Provision	1,200	Prepaid Insurance	1,440
	1,38,000		1,38,000

From the above data, current ratio is calculated as under:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{48,000}{48,000} = 1:1$$

$$\text{Current Assets} = \text{Sundry Debtors} + \text{Stock} + \text{Cash} + \text{Prepaid insurance} \\ = 18,000 + 24,000 + 4,560 + 1,440 = ₹ 48,000$$

$$\text{Current Liabilities} = \text{Sundry Creditors} + \text{Taxation Provision} \\ = 46,800 + 1,200 = ₹ 48,000$$

ii. Quick Ratio

This ratio is also known as *acid test ratio* or *liquid ratio*. It is a more severe test of liquidity of a company. It shows the ability of a business to meet its immediate financial commitments. It is used to supplement the information given by the current ratio.

Formula:

$$\text{Quick Ratio} = \frac{\text{Quick (or Liquid) Assets}}{\text{Current Liabilities}} = \frac{(\text{Current Assets} - \text{inventory} - \text{Prepaid Expenses})}{\text{Current Liabilities}}$$

Financial Statement Analysis

Quick assets and quick liabilities: The quick assets include cash debtors (excluding bad debts) and securities which can be realized without difficulty. Stock is not included in quick assets for the purpose of this ratio. Similarly, prepaid expenses are also excluded as they cannot be converted into cash. Liquid or quick liabilities refer to all current liabilities except bank overdraft.

Taking the data given above, calculate the quick ratio.

Solution:

$$\text{Quick Assets} = \text{Cash at bank} + \text{Sundry Debtors} = ₹ 4,560 + ₹ 18,000 = ₹ 22,560$$

$$\text{Quick Liabilities} = \text{Sundry Creditors} + \text{Taxation Provision} = 46,800 + 1,200 = ₹ 48,000$$

$$\text{Quick ratio} = \frac{22,560}{48,000} = 0.47:1$$

Significance and Objective of Quick Ratio Quick ratio is a more rigorous test of liquidity of a firm than the current ratio. When quick ratio is used along with current ratio, it gives a better picture of the firm's ability to meet its short-term liabilities out of its short-term assets. This ratio is of great importance for banks and financial institutions.

Generally, a quick ratio of 1:1 is considered to represent a satisfactory current financial position. In the above solution, the quick ratio of 0.47:1 is not at all satisfactory because it is less than 1:1. On account of such a low ratio, the business may find itself in serious financial difficulties.

2. CAPITAL STRUCTURE RATIOS OR GEARING RATIOS (Long-term Solvency)

Capital structure ratios are also referred to as gearing ratios, solvency ratios, or leverage ratios. These are used to assess a company's long-term viability. A company's long-term solvency is determined by two factors:

- (i) its capacity to pay back principal when it is due and
- (ii) its consistent interest payments. To put it another way, long-term creditors, such as debenture holders and financial institutions, are concerned with both the security of their loan amount and the company's capacity to pay interest.

They, therefore, also consider the earning capacity of the company to know whether it will be able to pay off interest on loan amount. Solvency ratios judge the ability of a firm to pay off its long-term liabilities.

Important Capital Structure Ratios:

- i. Debt-equity ratio
- ii. Proprietary ratio
- iii. Interest coverage ratio
- iv. Capital gearing ratio

i. Debt-equity Ratio

This ratio attempts to measure the relationship between long-term debts and shareholders' funds. In other words, this ratio measures the relative claims of long-term creditors on the one hand and the claims of owners on the other hand, on the assets of the company. This ratio is calculated by any of the two methods:

Method I

$$\text{Debt-equity Ratio} = \frac{\text{Long - term debts}}{\text{Shareholders' funds}}$$

Long-term debts include debentures, long-term loans, say from financial institutions, etc.

Shareholders' funds, on the other hand, **include** share capital (both equity and preference) and accumulated profits in the form of general reserve, capital reserve and any other fund that belongs to the shareholders. Past accumulated losses and deferred expenditure like preliminary expenses should be deducted while computing shareholders' funds.

Method II

$$\text{Total Debt-equity Ratio} = \frac{\text{Total debts (short - term + long - term)}}{\text{Shareholders' funds}}$$

$$= \frac{\text{External Equities}}{\text{Internal Equities}}$$

Total debts or external equities include all outside liabilities, both short-term and long-term. In other words, external equities include debentures, sundry creditors, bills payable, bank overdraft, short- and long-term loans, outstanding expenses, taxation provision, proposed dividend, etc. Internal equities refer to shareholders funds, as explained in method I.

Significance and Objectives of Debt-equity Ratio This ratio shows the relative amount of funds, supplied to the company, by outsiders and by owners. A low debt to equity ratio implies a greater claim of owners on the assets of the company than the creditors. On the

other hand, a high debt-equity ratio indicates that the claims of the creditors are greater than those of the owners.

The debt, equity ratio of 1:1 is generally acceptable. From the point of view of the company, the lower this ratio, the less the company has to worry in meeting its fixed obligations. This ratio also indicates the extent to which a company has to depend upon outsiders for its financial requirements. In the long-term financial condition of a business, the debt-equity ratio enjoys the same importance as the current ratio in the analysis of short-term financial position.

ii. Proprietary Ratio

This is a variant of debt-equity ratio. It measures the relationship between shareholders' funds and total assets. Its formula is:

$$\text{Proprietary ratio} = \frac{\text{Shareholders' funds}}{\text{Total assets}}$$

Shareholders' funds comprise ordinary share capital, preference share capital and all items of reserves and surplus. Total assets include all tangible assets and only those intangible assets which have a definite realisable value.

Significance and Objective of Proprietary Ratio Proprietary ratio shows the extent to which shareholders own the business and thus indicates the general financial strength of the business. The higher the proprietary ratio, the greater the long-term stability of the company and consequently greater protection to creditors. However, a very high proprietary ratio may not necessarily be good because if funds of outsiders are not used for long-term financing, a firm may not be able to take advantage of trading on equity.

Example

Balance Sheet

Liabilities	₹	Assets	₹
Equity Capital	1,50,000	Goodwill (at cost)	50,000
10% Preference Capital	50,000	Plant and machinery	1,80,000
General reserve	70,000	Land and building	1,20,000
Profit and Loss Account	30,000	Stock in trade	60,000
9% Debentures	1,00,000	Investments	40,000
Sundry Creditors	95,000	Sundry Debtors	35,000
Wages outstanding	5,000	Cash and bank	15,000
	5,00,000		5,00,000

100

Calculate (i) Debt-Equity Ratio; (ii) Proprietary Ratio.

Solution:

(i) Debt-equity ratio

Method I

$$\begin{aligned} \text{Debt-equity ratio} &= \frac{\text{Long - term debts}}{\text{Shareholders funds}} \\ &= \frac{\text{Debentures}}{\text{Pref. Capital + Equity Capital + G. Reserve + P \& L A / c}} \\ &= \frac{1,00,000}{50,000 + 1,50,000 + 70,000 + 30,000} \\ &= \frac{1,00,000}{3,00,000} = 1:3 \text{ or } 0.33 \end{aligned}$$

This ratio of 1:3 indicates that for every three rupees of equity, the firm has raised rupee one by long-term debt. In other words, the claims of owners on the assets are three times the claims of debenture-holders.

Method II

$$\begin{aligned} \text{Total Debt-equity ratio} &= \frac{\text{Total Debt}}{\text{Shareholders Funds}} \\ &= \frac{\text{Debentures + Current Liabilities}}{\text{Shareholders Funds}} = \frac{2,00,000}{3,00,000} = 2:3 \text{ or } 0.67 \end{aligned}$$

$$\text{(ii) Proprietary ratio} = \frac{\text{Shareholders Funds}}{\text{Total Assets}} =$$

$$\frac{1,50,000 + 50,000 + 70,000}{5,00,000} = \frac{3,00,000}{5,00,000} = 3:5 \text{ or } 60\%$$

iii. Interest Coverage Ratio (Debt Service Ratio or Fixed Charges Cover)

This ratio indicates whether the business earns sufficient profit to pay periodically the interest charges.

Formula:

Interest Coverage Ratio =

Earnings before tax and interest (EBIT)

Fixed interest charges (i.e. interest on debentures and long - term loans)

Significance and Objective of Interest Coverage Ratio This ratio is very important from the lender's point of view because it indicates the ability of a company to pay interest out of its profits. This ratio also indicates the extent to which the profits of the company may decrease without (in any way) affecting its ability to meet its interest obligations. The standard for this ratio for an industrial company is that interest charges should be covered six to seven times.

From the following, calculate the interest coverage ratio:

Profit after charging interest on debentures and tax = ₹ 25,000,
Interest charged = ₹ 5,000, Provision of tax = ₹ 10,000

Solution:

$$\text{Interest Coverage ratio} = \frac{\text{Earnings before tax and interest (EBIT)}}{\text{Interest charges}}$$

$$= \frac{25,000 + 5,000 + 10,000}{5,000} = \frac{40,000}{5,000} = 8 \text{ times}$$

iv. Capital Gearing Ratio:

This ratio shows the ratio of preference capital plus debentures to ordinary capital. Put otherwise, it is the proportion of dividend-bearing and fixed-interest capital to regular capital.

A company's capital structure is considered highly geared if this ratio is higher. In these situations, the company's ordinary shares will be speculative since the rate of return on ordinary capital will rise significantly as a result of a slight increase in profit. This is a profitable but risky situation.

$$\text{Gearing Ratio} = \frac{\text{Fixed Interest Bearing Capital}}{\text{Ordinary Capital}}$$

The higher this ratio, the more unstable will be the ordinary shares because major share of the profit will be absorbed by debenture interest and preference dividend and there will be greater fluctuations in the rate of equity dividend.

Some authors suggest that while computing this ratio, the equity shareholders' funds must be compared with preference capital and debentures. It means that reserves and other free reserves must be added to equity share capital. (But the general opinion is that this should be added only if they are substantial i.e. having a very large amount).

3. **TURNOVER RATIOS (Performance Ratios or Activity Ratios)**

Turnover ratios are used to indicate the efficiency with which assets and resources of the firm are being utilized. These ratios are known as turnover ratios because they indicate the speed with which assets are being converted or turned over into sales. These ratios, thus, express the relationship between sales and various assets. A higher turnover ratio generally indicates better use of capital resources which in turn has a favourable effect on the profitability of the firm.

Important Turnover Ratios

- i. Inventory turnover ratio
- ii. Debtors' turnover ratio
- iii. Fixed assets turnover ratio
- iv. Working capital turnover ratio
- v. Capital turnover ratio
- vi. Creditors turnover ratio

i. Inventory Turnover Ratio (Stock Turnover Ratio)

This ratio is calculated by dividing the cost of goods sold by average inventory.

Formula:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average Stock (or Inventory)}}$$

where Cost of goods sold = Sales – Gross profit

OR Cost of goods sold = Opening stock + Purchases + Carriage inward and other direct expenses – Closing stock

Average Stock = $1/2$ (Opening stock + Closing stock)

This ratio thus establishes the relationship between the cost of goods sold during a given period and the average amount of stock carried during the period.

Alternative Method: When cost of goods sold figure is not available, inventory turnover ratio may be calculated by the following methods:

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Average Stock (at selling prices)}}$$

$$\text{Or Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Average Stock (at cost)}}$$

Example

Opening Stock = ₹ 29,000 Purchases = ₹ 2,42,000 Sales = ₹ 3,20,000
Gross Profit = 25% of sales
Calculate stock turnover ratio.

Solution:

In order to calculate this ratio, figure of closing stock is required which is not given in the question. It is thus computed as follows by preparing the Trading Account:

Particulars	Amount ₹	Particulars	Amount ₹
To Opening Stock	29,000	By Sales	3,20,000
To Purchases	2,42,000	By Closing Stock	
To Gross Profit		(Balancing Figure)	31,000
(25% of 3,20,000)	80,000		
Total	3,51,000	Total	3,51,000

Cost of goods sold = 3,20,000 – 80,000 = ₹ 2,40,000

OR = 29,000 + 2,42,000 – 31,000 = ₹ 2,40,000

$$\text{Average stock} = \frac{29,000 + 31,000}{2} = ₹ 30,000$$

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average stock}} = \frac{2,40,000}{30,000} = 8 \text{ times}$$

Significance and Objectives of Inventory Turnover Ratio Inventory or stock turnover ratio indicate the efficiency of a firm's inventory management. This ratio gives the rate at which stocks are converted into sales and then into cash. A low inventory turnover ratio is an indicator of dull business, accumulation of inventory, over-investment in inventory or unsaleable goods, etc. Generally speaking, a high stock turnover ratio is considered better as it indicates that more sales are being produced by each rupee of investment in stock but a higher stock turnover ratio may not always be an indicator of favourable results. It may be the result of a very low level of stock which results in frequent out-of-stock positions. Such a situation prevents the company from meeting

customers' demands and the company cannot earn maximum profits.

Thus, too high and too low inventory turnover ratio may not be good and should be investigated further. A company should have a proper inventory turnover ratio so that it is able to earn a reasonable margin of profit.

ii. Debtors Turnover Ratio (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 computed as follows:

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

The term debtors include trade debtors and bills receivable. Doubtful debts are not deducted from debtors. Moreover, debtors that do not arise from regular sales should be excluded, e.g., a bill receivable from buyer of an old plant and machinery should be excluded.

Example

From the following information, calculate Debtors Turnover Ratio:

Total sales for 2021 = ₹ 5,00,000 Cash sales for 2021 = ₹ 1,00,000
Debtors on 1 January 2021 = ₹ 1,90,000 Debtors on 31 December 2021 = ₹ 2,10,000

Solution:

Credit sales are total sales *minus* cash sales.

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}} = \frac{4,00,000}{2,00,000} = \mathbf{2 \text{ times}}$$

$$\text{Average Debtors} = \frac{1}{2} (1,90,000 + 2,10,000) = ₹ 2,00,000.$$

Average Collection Period The debtor's turnover ratio is usually supplemented by average collection period. The debtor's turnover ratio together with average collection period involves the following steps:

(a) Calculation of daily sales — This is computed as follows:

$$\text{Sales per day} = \frac{\text{Net Sales (Credit)}}{\text{No. of working days in a year}}$$

(b) Calculation of average collection period — This is calculated as follows:

$$\text{Average Collection Period} = \frac{\text{Days in the year}}{\text{Debtors turnover ratio}}$$

Or, alternatively = $\frac{\text{Debtors}}{\text{Sales (Credit)}} \times 365 \text{ days}$

Suppose — Credit sales for the year = ₹ 5,40,000 Debtors at the end = ₹ 90,000

Average collection period = $\frac{\text{Debtors}}{\text{Sales (Credit)}} \times 365 \text{ days} = \frac{90,000}{5,40,000} \times 365 = 61 \text{ days}$

365 = 61 days.

Thus, debtors represent uncollected accounts in respect of 61 days of sales. In this case, debtor's turnover ratio is as follows:

Debtors Turnover Ratio = $\frac{5,40,000}{90,000} = 6 \text{ times}$

Average collection period may also be calculated as follows:

Average collection period = $\frac{\text{Days in the year}}{\text{Debtors turnover ratio}} = \frac{365}{6} = 61 \text{ days}$

Significance and Objectives of Debtors Turnover Ratio The significance of this ratio lies in the fact that debtors constitute one of the important items of current assets and this ratio indicates as to how many days' average sales are tied up in the amount of debtors. The efficiency of debt collection is also indicated by this ratio. A higher debtors turnover ratio indicates that debts are being collected more quickly. Changes in this ratio show the changes in the company's credit policy or changes in its ability to collect from its debtors. This ratio is an excellent supplement to the information provided by current ratio.

iii. Fixed Assets Turnover Ratio

This ratio indicates the efficiency with which the firm is utilizing its investments in fixed assets such as plant and machinery, land and building, etc. It is computed as under:

Fixed Assets Turnover = $\frac{\text{Sales (or Cost of Sales)}}{\text{Net Fixed Assets}}$

The term net fixed assets mean depreciated value of fixed assets

Significance and Objectives of Fixed Assets Turnover Ratio

Generally speaking, a high ratio indicates efficient utilization of fixed assets in generating sales and a low ratio may signify that the firm has an excessive investment in fixed assets.

Example

From the following figures, calculate Fixed Assets Turnover ratio.
 Sales = ₹ 10,00,000 Gross Profit = 20% on sales Fixed Assets (Gross)
 = ₹ 2,50,000 Less Depreciation = 50,000 Fixed Assets (Net) =
 2,00,000

Solution:

Cost of sales = Sales less Gross profit = 10,00,000 less 20% =
 ₹ 8,00,000

Fixed Assets Turnover Ratio = Cost of Sales / Net Fixed Assets =
 8,00,000 / 2,00,000 = 4 : 1

iv. Working Capital Turnover Ratio

This ratio indicates the efficiency or inefficiency in the utilization of working capital in making sales. It is computed as follows:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Sales (or Cost of Sales)}}{\text{Net Working Capital}}$$

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

Significance and Objectives of Working Capital Turnover Ratio

A high working capital turnover ratio show the efficient utilization of working capital in generating sales. A low ratio, on the other hand, may indicate excess of net working capital. This ratio thus shows whether working capital is efficiently utilized or not. This ratio is considered better than Stock Turnover Ratio because it shows the utilization of the entire working capital whereas stock turnover ratio indicates only the turnover of inventories which is only a part of the working capital.

Example

From the following information, calculate Working Capital Turnover Ratio:

Sales = ₹ 10,00,000 Gross Profit = 20% Current Assets = 2,50,000
 Current Liabilities = 90,000

Solution:

Cost of Sales = Sales – Gross Profit = 10,00,000 – 20% = ₹ 8,00,000
 Net Working Capital = Current Assets – Current Liabilities =
 2,50,000 – 90,000 = ₹ 1,60,000

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Working Capital}} = \frac{8,00,000}{1,60,000}$$

= 5 times

v. Capital Turnover Ratio

This ratio shows the relationship between cost of sales (or sales) and the total capital employed.

Formula:

$$\text{Capital Turnover Ratio} = \frac{\text{Sales (or Cost of Sales)}}{\text{Total Capital Employed}}$$

The term capital employed includes the long-term liabilities and total of shareholders' funds. From this are deducted non-operating assets (e.g., investments) and fictitious assets, like preliminary expenses, discount on the issue of shares, debit balance of Profit and Loss Account, etc. Thus,

$$\text{Total Capital Employed} = \text{Equity Capital} + \text{Pref. Capital} + \text{Reserves} + \text{Debentures} + \text{Long-term Loans} - \text{Fictitious Assets} - \text{Non-operating Investments}$$

It should be noted that capital employed as used in this ratio is computed in the same way as used in Return on Investment (ROI) discussed in Profitability Ratios later in this Chapter.

Significance and Objectives of Capital Turnover Ratio This ratio shows the efficiency with which capital employed in a business is used. A high capital turnover ratio indicates the possibility of greater profit and a low capital turnover ratio is a sign of insufficient sales and possibility of lower profits.

vi. Creditors Velocity or Creditors' Ratio:

We have seen in the above paragraph, the debtors' ratio indicates how many days it takes to recover the money owed for credit sales. Similarly, the velocity of our creditors determines how many days we have to pay them for credit purchases. Assume that the credit period is 45 days, meaning that our creditors grant us a credit term of 45 days. If the creditors' velocity is 30 days, meaning that we make payments within 30 days, it indicates that we do not fully utilize the credit period that is granted to us.

Suppose at the end of year our creditors are ₹ 5000, bills payable ₹ 1,000 and credit purchases ₹ 1,46,000, then the creditors' velocity will be found out as follows:

$$\text{Creditors' Ratio} = \frac{(\text{Creditors} + \text{Bills Payable})}{\text{Average Daily Purchase}} =$$

$$\frac{(\text{Rs. } 5,000 + \text{Rs. } 1,000)}{\text{Rs. } 400} = \frac{\text{Rs. } 6,000}{\text{Rs. } 400} = 15 \text{ days}$$

Here average daily purchases = $\frac{\text{Rs. } 1,46,000}{365} = ₹ 400$

OR

$$\text{Creditors Velocity} = \frac{(\text{Creditors} + \text{Bills Payable})}{\text{Credit Purchase}} \times 365 =$$

$$\frac{(\text{Rs. } 5,000 + \text{Rs. } 1,000)}{\text{Rs. } 1,46,000} \times 365 = \frac{\text{Rs. } 6,000}{\text{Rs. } 1,46,000} \times 365 = 15 \text{ days}$$

If Creditors Turnover is to be calculated, it will be computed in the same way as debtors' turnover.

$$\text{Creditors Turnover} = \frac{\text{Credit Purchase}}{\text{Average Creditors}}$$

If creditors Ratio or Average Payment Period is to be calculated on the basis of Creditors Turnover, it will be done as follows:

$$\text{Creditors Ratio} = \frac{(360 \text{ or } 365)}{\text{Creditors Turnover}}$$

Illustration 11

The following Balance Sheet of Lucky Co. Ltd was prepared on 31st March, 2025

Liabilities	₹	Assets	₹
Share Capital	2,30,000	Land and Building	3,00,000
General Reserve	1,00,000	Plant and Machinery	1,80,000
Debentures	2,20,000	Debtors	1,90,000
Profit and Loss A/c	1,70,000	Cash in hand	12,000
Creditors	1,30,000	Cash at Bank	1,88,000
Bills Payable	50,000	Preliminary Expenses	30,000
	9,00,000		9,00,000

Sales during the year 2025 amounted to ₹ 4,80,000.

Calculate: a) Fixed Asset Turnover Ratio, b) Working Capital Turnover Ratio, c) Capital Turnover Ratio.

Solution:

Financial Statement Analysis

(a) Fixed Assets Turnover Ratio = $\frac{\text{Sales}}{\text{Net Fixed Assets}}$

$$\frac{4,80,000}{3,00,000 + 1,80,000} = \frac{4,80,000}{4,80,000} = 1 \text{ time}$$

Fixed assets = Land and building + Plant and machinery

(b) Working Capital Turnover Ratio = $\frac{\text{Sales}}{\text{Net Working Capital}}$

$$= \frac{4,80,000}{2,10,000} = 2.29 \text{ times}$$

Net Working Capital = Current Assets – Current Liabilities
 Current Assets = Debtors + Cash in hand + Bank Balance = ₹ 1,90,000 + 12,000 + 1,88,000 = ₹ 3,90,000
 Current Liabilities = Creditors + Bills Payable = 1,30,000 + 50,000 = ₹ 1,80,000
 Net Working Capital = 3,90,000 – 1,80,000 = ₹ 2,10,000

(c) Capital Turnover Ratio = $\frac{\text{Sales}}{\text{Capital Employed}}$

$$= \frac{4,80,000}{6,90,000} = 0.7 \text{ times}$$

Capital employed is Fixed assets *plus* Net working capital, i.e.
 4,80,000 + 2,10,000 = ₹ 6,90,000.

Alternatively, Capital employed may be computed as follows:

Particulars	₹
Share Capital	2,30,000
Add: General Reserve	1,00,000
Add: Profit and Loss A/c	1,70,000
Add: Debenture	2,20,000
	7,20,000
Less: Preliminary Expenses	30,000
Capital Employed	6,90,000

Illustration 12

From the information given below, calculate the following ratios:

- (i) Quick Ratio (ii) Stock Turnover Ratio (iii) Debt-Equity Ratio

Information: Current Assets ₹ 5,00,000; Opening Stock ₹ 50,000; Closing Stock ₹ 1,50,000; Cost of Goods Sold ₹ 12,00,000; Gross Profit ₹ 2,00,000; Indirect expenses ₹ 20,000; Equity Share Capital ₹ 7,00,000; 10% Preference Share Capital ₹ 3,00,000; 12% Debentures ₹ 2,00,000; Current Liabilities ₹ 2,00,000; General Reserve ₹ 1,00,000.

Solution:

$$(i) \text{ Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}} = \frac{5,00,000 - 1,50,000}{2,00,000} =$$

$$\frac{3,50,000}{2,00,000} = 1.75:1$$

$$(ii) \text{ Stock turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

$$= \frac{12,00,000}{\frac{1}{2}(50,000 + 1,50,000)} = \frac{12,00,000}{1,00,000} = 12 \text{ times}$$

$$(iii) \text{ Debt-equity ratio} = \frac{\text{Long - term debts}}{\text{Shareholders funds}}$$

$$= \frac{2,00,000}{7,00,000 + 3,00,000 + 1,00,000} = \frac{2,00,000}{11,00,000} = 2:11$$

4. PROFITABILITY RATIOS

Every business should earn sufficient profits to survive and grow over a long period of time. In fact, efficiency of a business is measured in terms of profits. Profitability ratios are calculated to measure the efficiency of a business.

Important Profitability Ratios

- i. Gross profit ratio
- ii. Net profit ratio
- iii. Operating ratio and expense ratios
- iv. Return on investments
- v. Return on equity
- vi. Earnings per share (EPS)
- vii. Dividend payout ratio

- viii. Dividend yield ratio
- ix. Price earnings ratio

Profitability of a business may be measured in two ways:

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

Profitability in relation to sales indicates the amount of profit per rupee of sales. Similarly, profitability in relation to investment indicates the amount of profit per rupee invested in assets. If a company is not able to earn a satisfactory return on investment, it will not be able to pay a reasonable return to its investors and the survival of the company may be threatened.

1. Profitability Ratios Based on Sales

These ratios are:

- i. Gross Profit Ratio
- ii. Net Profit Ratio
- iii. Operating Ratio

i. Gross Profit Ratio (Gross Profit Margin)

This ratio expresses the relationship between gross profit and sales. It is calculated as follows:

$$\text{Gross Profit Ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

Net sales mean sales *minus* sales returns. Gross profit is sales *minus* cost of goods sold. This ratio, thus may also be computed as follows:

$$\text{Gross Profit Ratio} = \frac{\text{Net Sales} - \text{Cost of Goods sold}}{\text{Net Sales}} \times 100$$

This ratio is usually expressed as percentage.

Example

Net sales = ₹ 10,00,000 Cost of goods sold = ₹ 7,50,000

Gross Profit = Sales - Cost of goods sold = 10,00,000 - 7,50,000 = ₹ 2,50,000

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 = \frac{2,50,000}{10,00,000} \times 100 = 25\%$$

Significance and Objectives of Gross Profit Ratio Gross profit ratio indicates the average margin on the goods sold. It shows whether the selling prices are adequate or not. It also indicates the extent to which selling prices may be reduced without resulting in losses.

A low gross profit ratio may indicate a higher cost of goods sold due to higher cost of production. It may also be due to low selling prices. A high gross profit ratio, on the other hand, indicates a relatively lower cost and is a sign of good management. A gross profit ratio may be increased by taking the following steps:

- (i) Lowering cost of goods sold, selling prices remaining constant. (ii) Increasing selling prices, the cost of goods remaining constant. (iii) Increasing the sale of those goods which have a higher gross margin.

ii. Net Profit Ratio (Net Profit Margin)

There are two variations of this ratio: (a) Net Operating Profit Ratio; and (b) Net Profit Ratio.

(a) Net Operating Profit Ratio This is the ratio of net operating profit to net sales. Its formula is:

$$\text{Net Operating Profit Ratio} = \frac{\text{Net operating profit}}{\text{Net Sales}} \times 100$$

Net operating profit is the gross profit *minus* all operating expenses. Operating expenses consist of the following:

- (i) *Administrative expenses*, like director's fees, legal expenses, office salaries, rent, insurance, etc. (ii) *Selling and distribution expenses*, like advertising, travelling expenses, salaries and commission of salesmen, etc.

Thus:

$$\text{Net Operating Profit} = \text{Gross profit} - \text{Adm. and selling expenses.}$$

(b) Net Profit Ratio

This is the ratio of net profit to net sales. It is computed as:

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

The concept of net profit is different from net operating profit. In calculating the net profit, all non-operating expenses and losses (e.g., loss on sale of old assets, provision for legal damages, etc.) are also deducted and all non-operating incomes (e.g., dividend income, interest received on investments, etc.) are added. Thus,

$$\text{Net Profit} = \text{Net Operating Profit} + \text{Non-operating Incomes} - \text{Non-operating Expenses}$$

$$\text{Or Net Profit} = \text{Gross Profit} - \text{All expenses} + \text{All other incomes}$$

Some accountants deduct income tax also for calculating the net profit.

Significance and Objectives of Net Profit Ratio The net profit ratio or net profit margin is the overall measure of a firm's ability to turn each rupee of sales into profit. It indicates the efficiency with which a business is managed. A firm with a high net profit ratio is in an advantageous position to survive in the face of rising cost of production and falling selling prices. Where the net profit ratio is low, the firm will find it difficult to withstand these types of adverse conditions.

Comparison of net profit ratio with other firms in the same industry or with the previous years will indicate the scope for improvement. This will enable the firm to maximize its efficiency.

Factors Affecting Profit Margin

While considering the profit margin, the following matters have to be carefully considered.

(a) **Depreciation provision:** The technique of providing depreciation must be taken into account, especially when comparing a company's profit margin to that of other companies. Different companies may employ various depreciation strategies. The amount charged would be higher if depreciation was provided on SLM than if it were charged using the declining balance approach. As a result, the first scenario shows less profit, whilst the second scenario will seem to indicate more. The profit margin is impacted if the depreciation method is altered. All of these must be taken into account by the analyst.

(b) **Other Incomes:** Other incomes shown in the financial statements inflate the profit margins but it is non-operating income. Only operating profit should be used to determine profitability because significant other income will provide the misleading impression.

(c) **Stock valuation:** The profit is significantly impacted by stock valuation. Overvaluation of opening stock would lower the gross profit margin. Both gross profit and net profit margin will increase when closing stock is valued at a higher price.

Illustration 13

The following is the Trading and Profit and Loss Account of XYZ Ltd for the year ending 30 June 2024.

Particulars	Amount ₹	Particulars	Amount ₹
To Opening Stock	38,000	By Sales	2,50,000
To Purchases	1,57,750	By Closing Stock	49,250
To Carriage Inwards	1,000		
To Wages	2,500		

To Gross Profit	1,00,000	Total	2,99,250
Total	2,99,250	Particulars	Amount ₹
Particulars	Amount ₹	By Gross Profit	1,00,000
To Adm. Expenses	50,500	By, Non-Operating	
To Selling Expenses	9,500	Incomes (Dividend)	3,000
To Interest Paid	1,000	Total	1,03,000
To Net Profit	42,000		
Total	1,03,000		

Calculate: (a) Gross Profit Ratio; (b) Net Profit Ratio; (c) Net Operating Profit Ratio.

Solution:

$$(a) \text{ Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 = \frac{1,00,000}{2,50,000} \times 100 = 40\%$$

$$(b) \text{ Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100 = \frac{42,000}{2,50,000} \times 100 = 16.8\%$$

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

$$\frac{40,000}{2,50,000} \times 100 = 16\%$$

$$* \text{ Net Operating Profit} = \text{Gross Profit} - \text{Selling Exp.} - \text{Adm. Exp.} = 1,00,000 - 9,500 - 50,500 = ₹ 40,000$$

iii. Operating Ratio and Expense Ratio

This is also an important profitability ratio. This ratio explains the relationship between cost of goods sold and operating expenses on the one hand and net sales on the other.

Formula:

$$\text{Operating Ratio} = \frac{\text{Cost of goods sold} + \text{Operating expenses}}{\text{Net Sales}} \times 100$$

In above Illustration, operating ratio is calculated as under:

$$\begin{aligned} \text{Cost of goods sold} &= \text{Opening Stock} + \text{Purchases} + \text{Carriage Inward} \\ &+ \text{Wages} - \text{Closing Stock} = ₹ 38,000 + 1,57,750 + 1,000 + 2,500 - \\ &49,250 = ₹ 1,50,000 \end{aligned}$$

$$\text{Operating Exp.} = \text{Selling Expenses} + \text{Adm. Expenses} = 9,500 + 50,500 = ₹ 60,000$$

$$\text{Operating Ratio} = \frac{1,50,000 + 60,000}{2,50,000} = \frac{2,10,000}{2,50,000} \times 100 = 84\%$$

The 84% operating ratio indicates that for every ₹ 1 of net sales, the operating cost is 84 paise. This means that the remaining 16 paise is the operating profit for every one rupee of sales. In the given illustration, net operating profit ratio is calculated as 16%. Thus operating ratio plus operating profit ratio is equal to 100 per cent.

Significance and Objectives of Operating Ratio The operating ratio is the yardstick to measure the efficiency with which a business is operated. It shows the percentage of net sales that is absorbed by cost of goods sold and operating expenses. A high operating ratio is considered unfavourable because it leaves a smaller margin of profit to meet nonoperating expenses. On the other hand, a lower operating ratio is considered a good sign.

Expense Ratios

These ratios present the relationship that exists between each item (or group) of expenses and the net sales. It indicates the portion of the sales which is consumed by the various items of operating cost. These ratios thus provide break-up of the operating ratio. Some of these ratios are:

$$(a) \text{ Raw Materials Ratio} = \frac{\text{Direct material cost}}{\text{Net Sales}} \times 100$$

$$(b) \text{ Labour Ratio} = \frac{\text{Direct labour cost}}{\text{Net Sales}} \times 100$$

$$(c) \text{ Factory Overheads Ratio} = \frac{\text{Factory overheads}}{\text{Net Sales}} \times 100$$

$$(d) \text{ Cost of Goods Sold Ratio} = \frac{\text{Cost of goods sold}}{\text{Net Sales}} \times 100$$

$$(e) \text{ Administrative Overheads Ratio} = \frac{\text{Office and admoverheads}}{\text{Net Sales}} \times 100$$

$$(f) \text{ Selling and Distribution Overheads Ratio} =$$

$$\frac{\text{Selling and distoverheads}}{\text{Net Sales}} \times 100$$

Profitability Ratios based on Investments

- Return on Investments (ROI), and
- Return on Shareholder's Equity (ROE).

iv. Return on Investment (ROI) or Return on Capital Employed (ROCE)

This is the most important test of profitability of a business. It measures the overall profitability. It is ascertained by comparing the profit earned and the capital (or funds) employed to earn it. It is calculated as follows:

$$\text{ROI} = \frac{\text{Selling and distoverheads}}{\text{Net Sales}} \times 100$$

This ratio is generally expressed as a percentage. The term **capital employed** is computed as follows:

Equity Share Capital + Preference Share Capital + Reserves and other Undistributed Profits + Long term loans and Debentures - Fictitious Assets (e.g., Preliminary Expenses) - Non-operating Assets (e.g., Investments)

Alternatively, **capital employed** may also be computed in the following way:

Fixed Assets Cost - Depreciation + Net Working Capital (i.e., current assets *minus* current liabilities and provisions)

The return on capital employed is dependent upon two factors, *viz.*, (i) net profit ratio, and (ii) capital turnover ratio. Thus:

$$\text{ROI} = \frac{\text{Profit}}{\text{Capital employed}} = \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Capital employed}}$$

Illustration 14

From the following Balance Sheet of Modi Steel Ltd, calculate Return on Investment (ROI).

Liabilities	Amount (₹)	Assets	Amount (₹)
Share Capital	5,00,000	Land & Building	4,00,000
General Reserve	1,00,000	Plant and Machinery	3,00,000
Debentures	2,00,000	Stock	70,000
Creditors	50,000	Debtors	30,000
		Cash at bank	50,000
Total	8,50,000	Total	8,50,000

Other Information: Net Profit for the year is ₹ 1,20,000 and sales

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for the year is ₹ 10,00,000.

Solution:

$$\text{Return on Investment (ROI)} = \frac{\text{Net Profit}}{\text{Capital employed}} \times 100 = \frac{1,20,000}{8,00,000} \times 100 = 15\%$$

Capital employed is calculated as follows:

Particulars		Amount (₹)
Share Capital		5,00,000
Add: General Reserve		1,00,000
Add: Debentures		2,00,000
Capital employed		8,00,000
Alternatively, it may also be computed as follows:		
Land and Building		4,00,000
Add: Plant and Machinery		3,00,000
Fixed Assets		7,00,000
Add: Net working Capital:		
Current Assets — Stock	70,000	
Debtors	30,000	
Cash	50,000	
Total Current Asset	1,50,000	
Less: Current Liabilities (Cr.)	50,000	1,00,000
Capital Employed		8,00,000

Significance and Objectives of ROI: ROI is the only ratio which satisfactorily measures the overall performance of a business from the point of view of profitability. This ratio indicates how well the management has utilized the funds supplied by the owners and creditors. In other words, this ratio is intended to measure the earning power of the net assets of the business. The higher the ROI, the more efficient the management is considered to be in using the funds available. In fact, this ratio can also be advantageously used in judging the performance efficiency of different firms in different industries. Management also uses this ratio for decision-making purposes.

Illustration 15

The financial statement of the company contains the following information for the year ending 31-03-2024

Particulars	Amount (₹)
Cash	1,60,000
Sundry debtors	4,00,000
Short term investment	3,20,000
Stock	21,60,000
Prepaid expenses	10,000
Total current assets	30,50,000
Current liabilities	10,00,000
10% Debentures	16,00,000
Equity share capital	20,00,000
Retained earnings	8,00,000

Statement of Profit for the year ending 31-03-2024

Particulars	Amount (₹)
Sales (20% cash sales)	40,00,000
Less: Cost of goods sold	28,00,000
Profit before interest & tax	12,00,000
Less: Interest	1,60,000
Profit before tax	10,40,000
Less: Tax @ 30%	3,12,000
Total	7,28,000

Calculate: (i) Quick ratio, (ii) Debt equity ratio (iii) Return on capital employed, and (iv) Average collection period (assuming 360 days in a year)

Solution:

$$(i) \text{ Quick ratio} = \frac{\text{Quick assets}}{\text{Quick liabilities}}$$

$$\text{Quick assets} = \text{Current assets} - \text{stock} - \text{prepaid expenses} = 30,50,000 - 21,60,000 - 10,000 = ₹ 8,80,000$$

$$\text{Quick ratio} = \frac{8,80,000}{10,00,000} = \mathbf{0.88:1}$$

$$(ii) \text{ Debt equity ratio} = \frac{\text{Long term debts}}{\text{Shareholders funds}} =$$

$$\frac{16,00,000}{20,00,000 + 8,00,000} = \mathbf{0.57:1}$$

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(iii) Return on capital employed (ROCE) =

$$\frac{\text{Profit before interest and tax}}{\text{Capital employed}} \times 100$$
$$= \frac{12,00,000}{44,00,000} \times 100 = \mathbf{27.27\%}$$

(iv) Average collection period = $\frac{\text{Sundry debtors}}{\text{Credit sales}} \times 360 \text{ days} =$

$$\frac{4,00,000}{32,00,000} \times 360 = \mathbf{45 \text{ days}}$$

DuPont Analysis

This analysis was started by the DuPont Corporation in USA in 1920 for performance measurement. A simple model of DuPont financial analysis is given in Fig. 3.1.

Amounts have been taken from Illustration 14. Required ratios are: ROI = 15% as computed in Illustration 14

$$\text{Net profit} = \frac{\text{Net Profit}}{\text{Sales}} \times 100 = \frac{1,20,000}{10,00,000} \times 100 = \mathbf{12\%}$$

$$\text{Capital turnover ratio} = \frac{\text{Sales}}{\text{Capital employed}} = \frac{10,00,000}{8,00,000} = \mathbf{1.25}$$

Thus:

$$\text{ROI} = \text{Net Profit Ratio} \times \text{Capital Turnover Ratio}$$

Fig. 3.1: Simple Model of DuPont Chart

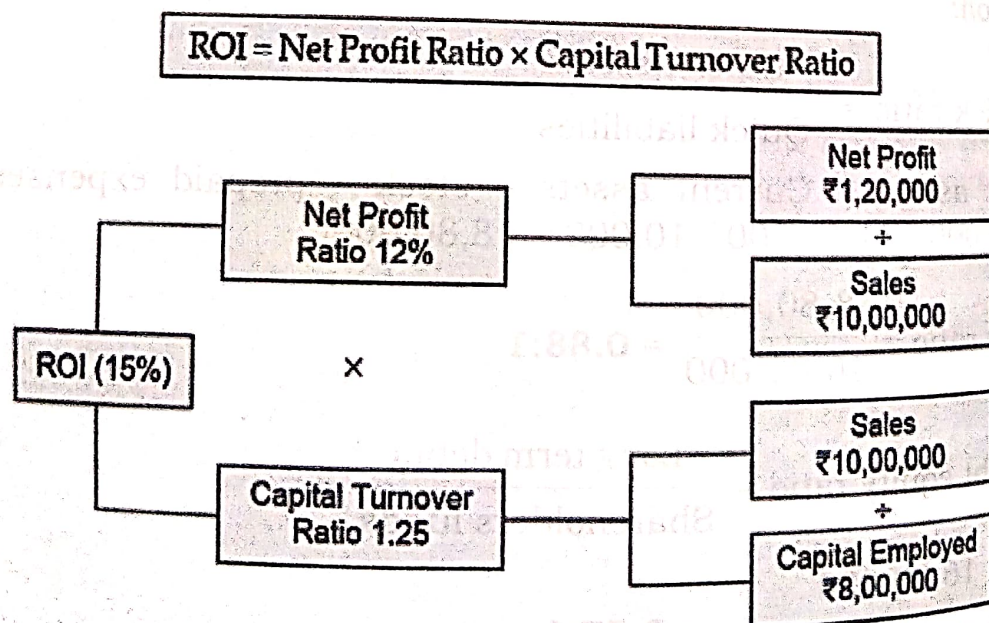


Fig. 3.1

v. Return on Shareholder's Equity

Profit is earned by business owners; thus, they are naturally interested in the return on their investment in the company's operations. This is measured by return on shareholders' equity. The whole amount of money owned by shareholders is referred to as shareholders' equity. Paid-up equity share capital, preference share capital, reserves, surplus, etc. are all included. "Value of Net Worth" is another name for shareholders' equity.

The return on capital employed measures the profitability in relation to funds supplied by both the owners and the creditors, while this ratio measures the profitability in relation to only owners' funds. So, it is also known as *Return on Proprietors' Funds* or *Return on Owners' Funds* or *Return on Shareholders' Investment*.

This ratio establishes the relationship between the net profit available to equity shareholder and the amount of capital invested by them.

Formula:

$$\text{Return on Shareholder's Equity Capital} = \frac{\text{Net Profit after interest taxes and preference dividend}}{\text{Equity shareholders funds}} \times 100$$

Net profit for the purpose of this ratio is taken after dividend payable to preference shareholders, if any. Equity shareholders' funds include equity capital, reserves and other undistributed profits. Since they bear all the risk, equity shareholders are the company's true owners. Therefore, a more thorough analysis of the Return on Equity (ROE) is required. The DuPont Analysis, which divides the ROE ratio into its three crucial parts, accomplishes this. These three elements of performance evaluation are equity multiplier, asset turnover, and profit margin.

Du Point Analysis

ROE = Net Profit Margin x Asset Turnover x Equity Multiplier
i.e.

$$\text{ROE} = \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}}$$

Net profit margin shows profitability, Asset turnover ratio assesses how well a company uses its assets, and equity multiplier serves as a stand-in for financial leverage. According to the DuPont Analysis, a company can raise its ROE by keeping a high net profit margin, making effective use of all of its assets, and using the most leverage

possible. The company must look at these three financial performance metrics if the ROE declines in order to determine the cause of the decline and implement corrective measures.

- **Return on Common Equity:** Preference shareholders and equity shareholders are two different categories of shareholders in a firm. It was found that the previous ratio could determine the return accessible to both kinds of stockholders. However, this ratio shows the profit available to only equity shareholders in relation to capital invested by them. The dividend due to preference shareholders must be subtracted from the profit for this purpose. All reserves and net profits that are accessible to equity shareholders are included in the equity shareholders' funds, in addition to the paid-up equity share capital.

$$\text{Return on Common's Equity} = \frac{\text{Net Profit After tax} - \text{Pref.Div.}}{\text{Equity Share Capital}} \times 100$$

The ratio is important, as it indicates profitability of a firm from the viewpoint of real owners who are ordinary shareholders, who bear all the risks of business. It signifies the success with which the management has been able to earn enough returns on funds supplied by the proprietors.

Significance and Objectives of Return on Shareholder's Equity

This ratio shows the profit percentage for equity shareholders. A high rate of return on equity shareholders' funds is favoured by investors and a higher market valuation is placed on such shares. This ratio is used for inter-firm comparison, to judge the comparative profitability of different firms.

vi. Return on Total Assets

The return on total assets implies how the funds supplied by both owners and creditors are utilised in business. Thus, it measures the overall profitability of the business. The assets may be (1) Total Assets or (2) Fixed Assets or (3) Tangible Assets.

Return on total assets (ROA) is computed as below:

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Taxes}}{\text{Total Assets}} \times 100$$

Amounts have been taken from Illustration 14. Required ratios are

$$= \frac{\text{Rs. 1,20,000}}{\text{Rs. 8,50,000}} \times 100 = 14.12\%$$

vii. Earnings Per Share (EPS)

This ratio measures the earnings per equity share, i.e., it measures the profitability of the firm on a per share basis. It is calculated as follows:

$$\text{Earnings per share} = \frac{\text{Net Profit after taxes} - \text{Preference dividend}}{\text{No. of equity shares}}$$

EPS is one of the most commonly quoted and widely publicized ratios. Accounting Standard (AS) 20 - Earning Per Share has been made mandatory in nature by the Institute of Chartered Accountant of India. Accordingly, each company should show earning per share in its Profit and Loss Account. EPS is commonly studied by potential investors for making investment decisions in share market.

viii. Dividend Payout Ratio (Or Payout Ratio)

It indicates the percentage of equity share earnings distributed as dividends to equity shareholders. Its formula is:

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend per share}}{\text{Earning per share (EPS)}}$$

ix. Dividend Yield Ratio

Dividend is declared by a company as a percentage of par value or paid-up value or a specific amount per equity share. Dividend yield ratio is:

$$\text{Dividend Yield Ratio} = \frac{\text{Dividend per equity share}}{\text{Market price per equity share}}$$

This ratio is important for those investors who make investment decisions for the purpose of earning a reasonable yield on the amount of investment.

x. Price Earnings Ratio (P/E Ratio)

This ratio is the market price of shares, expressed as multiple of earnings per share (EPS). Its formula is:

$$\text{P/E ratio} = \frac{\text{Market price per equity share}}{\text{Earning per share}}$$

This ratio guides investors to decide whether to buy shares of a company or not. For example, if earning per share of a company is ₹ 9 and its market price is ₹ 63 per share, then its P/E ratio is 7 (i.e., ₹ 63 ÷ ₹ 9). In other words, market price of every rupee of earning is seven times. Accordingly, an investor can decide whether to purchase share of a company with a P/E ratio of seven.

Illustration 16

The following are the summarised Balance sheets. You are required to comment on

(1) Changes in the liquid position of the company with the help of liquidity ratios.

(2) To comment on the profitability with the help of return on total assets and earnings per share.

(3) To comment on the capital structure of the company with the help of Proprietary Ratio

Net Profit after interest and taxes are ₹ 30,000 and ₹ 35,000 respectively. Rate of taxes is 50%.

Balance Sheets

Particulars	Note No.	2023 (₹)	2024 (₹)
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Shares of ₹ 100 each		1,00,000	1,50,000
10% Pref. Shares of ₹ 100 each		50,000	50,000
(B) Reserves & Surplus:			
Reserves		2,00,000	1,50,000
[2] Non-Current Liabilities:			
12% Debentures		1,00,000	1,00,000
[3] Current Liabilities:			
Proposed Dividend		20,000	20,000
Other Current Liabilities		80,000	1,20,000
TOTAL		5,50,000	5,90,000
[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets (Fixed Assets less Depreciation)		3,50,000	4,90,000
[2] Current Assets: Stock		1,50,000	60,000
Debtors		40,000	35,000
Cash		10,000	5,000
TOTAL		5,50,000	5,90,000

Solution:

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

$$\text{For 2023} = \frac{\text{Rs. 2,00,000}}{\text{Rs. 1,00,000}} = 2:1$$

$$\text{For 2024} = \frac{\text{Rs. 1,00,000}}{\text{Rs. 1,40,000}} = 0.71:1$$

Current ratio indicates the working capital position. There has been considerable deterioration in the current ratio. On one hand, current assets have been reduced to almost half of what they were last year, whereas the current liabilities have increased by nearly 40%. Normally, this ratio should be 2:1 i.e. the value of current assets should be twice the current liabilities.

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

Where, Liquid Assets = Current Assets – Stock and

$$\text{For 2023} = \frac{\text{Rs. 50,000}}{\text{Rs. 1,00,000}} = 0.5:1$$

$$\text{For 2024} = \frac{\text{Rs. 40,000}}{\text{Rs. 1,40,000}} = 0.29:1$$

The liquid ratio is a better indicator of liquid position of the company and shows whether the company will be able to meet its current obligation due for immediate payments at a short notice. The ratio for this company during 2023 was unsatisfactory and has deteriorated to such an extent during 2024, that the company would be facing financial crisis, if immediate corrective steps are not taken to improve this situation. It may be suggested that the company should issue either shares or debentures to improve its liquid position.

$$(C) \text{ Return on Total Assets} = \frac{\text{Net Profit after Taxes}}{\text{Total Assets}} \times 100$$

$$\text{For 2023} = \frac{\text{Rs. 30,000}}{\text{Rs. 5,50,000}} \times 100 = 5.45\%$$

$$\text{For 2024} = \frac{\text{Rs. 35,000}}{\text{Rs. 5,90,000}} \times 100 = 5.93\%$$

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There has been a slight improvement in this ratio as compared to previous year. But no final opinion can be given as to whether the ratio is reasonable or not, unless this ratio is compared to the ratios of similar companies in the industry.

$$(D) \text{ Earnings Per Share} = \frac{\text{Net Profit After Tax - Pref.Dividend}}{\text{No.of Equity Shares}}$$

$$\text{For 2023} = \frac{\text{Rs. 30,000} - \text{Rs. 5,000}}{1,000} = \frac{\text{Rs. 25,000}}{1,000} = ₹ 25$$

$$\text{For 2024} = \frac{\text{Rs. 35,000} - \text{Rs. 5,000}}{\text{Rs. 1,500}} = \frac{\text{Rs. 30,000}}{1,000} = ₹ 20$$

The EPS has declined during the current year as compared to the previous year, which is not satisfactory. However, normally an EPS of ₹ 20 may be considered to be satisfactory.

$$(E) \text{ Proprietary Ratio} = \frac{\text{Proprietors Funds}}{\text{Total Assets}} \times 100$$

$$\text{For 2023} = \frac{\text{Rs. 3,50,000}}{\text{Rs. 5,50,000}} \times 100 = 63.64\%$$

$$\text{For 2024} = \frac{\text{Rs. 3,50,000}}{\text{Rs. 5,90,000}} \times 100 = 59.32\%$$

The ratio indicates the proportion of funds contributed by the proprietors. The higher the ratio, the stronger is the financial position of business. The ratio during 2023 shows a comfortable position which has gone down in 2024 showing a deteriorating financial position. The proprietor's funds have remained stationary during these two years against which total assets have increased by nearly ₹ 40,000. Such a declining trend must be arrested, as the existing position is not satisfactory.

Illustration 17

From the following statements of Prime Company Ltd. for the year ending 31st March, 2024, you are required to rearrange the items in the form of Financial Statements suitable for analysis and calculate the following ratios and state the significance of each such ratio:

- (1) Current ratio (2) Acid-test ratio (Liquid ratio) (3) Operating ratio
- (4) Stock turnover ratio (5) Debtors' Ratio and Debtors' Turnover

Balance Sheet as on 31/3/2024

Particulars	Note No.	Amount (₹)	Amount (₹)
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
50,000 Equity Shares of ₹ 1 each			50,000
(B) Reserves & Surplus			
General Reserve		40,000	
Profit & Loss A/c		15,000	55,000
[2] Current Liabilities:			
Creditors			20,000
TOTAL			1,25,000
[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets:			
Land & Building		50,000	
Plant & Machinery		20,000	70,000
[2] Current Assets:			
Stock		15,000	
Debtors		25,000	
Cash & Bank		15,000	55,000
TOTAL			1,25,000

Dr. Profit and Loss Account for the year ending 31/3/2024 Cr.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Opening stock	25,000	By Sales	1,80,000
To Purchases	1,05,000	By Closing stock	15,000
To Gross Profit	65,000		
	1,95,000		1,95,000
Particulars	Amount (₹)	Particulars	Amount (₹)
To Administrative Exp.	23,000	By Gross Profit	65,000
To Selling Exp.	10,000		
To Finance Exp.	2,000		
To Net Profit	30,000		
	65,000		65,000

Solution:

$$(1) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\text{Rs. 55,000}}{\text{Rs. 20,000}} = 2.75:1$$

The standard for current ratio is 2 : 1, whereas the same for this company is 2.75:1 signifying that for every ₹ 1 of current liabilities the company is having ₹ 2.75 worth of current assets. The state of affairs is quite comfortable and looking to the fact that current assets mostly comprise liquid assets, it can be said that the company will be able to meet its current liabilities with ease, as and when they arise.

$$(2) \text{ Acid-Test or Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

Note that the two ratios, liquid ratio and acid test ratio are used here to mean the same ratio.

$$\text{Acid-Test Ratio} = \frac{\text{Rs. 40,000}}{\text{Rs. 20,000}} = 2:1$$

This ratio indicates the ability of the company to meet its current obligations without delay. The standard may be taken as 1:1, whereas in the case of this company the ratio is as high as 2:1. Hence, the company would be very easily meeting its short-term obligations as and when they fall due.

(3) Operating Ratio =

$$\frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

$$= \frac{\text{Rs. 1,15,000} + \text{Rs. 33,000}}{\text{Rs. 1,80,000}} \times 100 = 82.22\%$$

This calculation shows that for sale of every ₹ 100, the operating expenses take up ₹ 83.33 leaving ₹ 16.67 as net profits for the proprietors. It signifies the efficiency of management. It is difficult to comment on the efficiency with which the business is managed only from this figure of 83.33%.

Comparison with the figures of other units in the same business and also with the past figures of the same company is required before any opinion can be given.

$$(4) \text{ Stock Turnover} = \frac{\text{Cast of Goods Sold}}{\text{Average Stock}} = \frac{\text{Rs. 1,15,000}}{\text{Rs. 20,000}} = 5.75$$

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

$$= \frac{\text{Rs. } 25,000 + \text{Rs. } 15,000}{2} = \text{Rs. } 20,000$$

This ratio indicates the speed with which the stock is turned over. The greater this ratio, the more efficient is the management of sales. In this particular case, the stock is turned over 5.75 times during the year or in other words the average stock is sold out within 9 weeks ($52 \div 5.75$). This may be treated as satisfactory turnover.

However, final opinion can be formed only after comparing this figure with those of other companies in the same business.

$$(5) \text{ Debtors Ratio} = \frac{\text{Debtors} + \text{Bills Receivables}}{\text{Average Daily Sales}}$$

$$= \frac{\text{Rs. } 25,000}{\text{Rs. } 500} = 50 \text{ days}$$

$$(\text{Average daily sales} = \frac{\text{Rs. } 1,80,000}{360 \text{ Days}} = \text{Rs. } 500)$$

Note: It is interesting to note that in order to arrive at the figure of daily sales, it is a common practice to divide the annual sales by 365. However, some suggest that it should better be divided by 360. If working days only are taken into account, then the total sales must be divided by 300 excluding non-working Sundays and holidays from 365.

Alternative Method:

$$\text{Debtors Ratio} = \frac{\text{Debtors} + \text{Bills Receivables}}{\text{Credit Sales}} \times 360$$

$$= \frac{\text{Rs. } 25,000}{\text{Rs. } 1,80,000} \times 360$$

$$= 50 \text{ days}$$

$$\text{Debtors Turnover} = \frac{\text{Rs. } 1,80,000}{\text{Rs. } 25,000} = 7.2$$

$$\text{Debtors Ratio} = \frac{360 \text{ Days}}{7.2} = 50 \text{ days}$$

As opening debtors are not given, we have taken closing debtors instead of average debtors.

The debtors ratio or the average collection period indicates the efficiency or otherwise of the collection department. It is difficult to give any judgment from the simple figure of 50 days, unless the average collection period of the whole industry is given. If 30 days is taken to be the average collection period, then this figure of 50 days shows an unsatisfactory credit and collection policy.

Illustration 18

The following are the Balance Sheets of Alpa Ltd. as on 31/3/2024 and 31/3/2025:

Balance Sheet

Particulars	Note No.	31/3/2024 (₹)	31/3/2025 (₹)
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Shares of ₹10 each		50,000	50,000
7% Preference Shares of ₹10 each		1,50,000	1,50,000
(B) Reserves & Surplus:			
Reserve Fund			
Profit & Loss A/c		5,000	7,500
General Reserve		8,000	5,000
[2] Non-Current Liabilities:			
Mortgage Loan		50,000	1,50,000
[3] Current Liabilities:			
Bank Overdraft		15,000	25,000
Other Current Liabilities & Provisions		7,500	15,000
TOTAL		2,85,500	4,02,500
[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets		1,80,500	2,66,500

[2] Current Assets: Stock	40,000	45,000
Debtors	60,000	87,000
Cash	5,000	4,000
TOTAL	2,85,500	4,02,500

Cash and Bank Account

Dr.	Amount (₹)	Particulars	Cr.
Particulars			Amount (₹)
To Balance B/f	7,10,000	By Equity Shareholders A/c	15,00,000
To Investment A/c	6,50,000	By Balance C/f	4,10,000
To 13% Debentures A/c	5,00,000		
To Securities Prem. A/c	50,000		
	19,10,000		19,10,000

Profit and Loss Appropriation Account

Dr.	31/3/24	31/3/25	Particulars	31/3/24	31/3/25
Particulars					
To Reserve Fund	500	2,500	By Balance B/f	4,000	8,000
To Eq. Share Dividend	5,000	2,500	By Profit	20,000	12,500
To Pre. Share Dividend	10,500	10,500			
To Balance C/f	8,000	5,000			
	24,000	20,500		24,000	20,500

Sales for the year ending on 31/3/2024 was ₹ 12,00,000 and for the year 31/3/2025 ₹ 9,00,000. After studying the financial statements, calculate the Liquidity Ratios, Activity Ratios and Capital Structure Ratios.

Solution: The financial position of the company may be examined from various angles:

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

$$2024 = \frac{\text{Rs. } 1,05,000}{\text{Rs. } 22,500} = 4.7:1$$

$$2025 = \frac{\text{Rs. } 1,36,000}{\text{Rs. } 40,000} = 3.4:1$$

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

$$2024 = \frac{\text{Rs. } 65,000}{\text{Rs. } 22,500} = 2.89:1$$

$$2025 = \frac{\text{Rs. } 91,000}{\text{Rs. } 40,000} = 2.275:1$$

Looking to the liquid position of the company, it is seen that current ratio has declined from 4.7:1 to 3.4:1, while the liquid ratio has also gone down from 2.89:1 to 2.275:1. However both the ratios are more than satisfactory. But it must be investigated whether the comfortable liquid position is not due to accumulation of slow-moving stock or due to loose collection policy.

$$(3) \text{ Stock Turnover} = \frac{\text{Sales}}{\text{Average Stock}}$$

$$2024 = \frac{\text{Rs. } 12,00,000}{\text{Rs. } 40,000} = 30$$

$$2025 = \frac{\text{Rs. } 9,00,000}{\text{Rs. } 42,500} = 21$$

The stock turnover has been calculated with the help of sales, in the absence of any information regarding cost of sales. The stock turnover has declined from 30 to 21 during the current year. However, both the figures are considerably high. Again, it must be checked whether this high ratio is not due to slow-moving stock.

(4) Sales: Looking to the figures of sales for both the years, it is revealed that sales have declined by 25% during the current year as compared to the last year. The matter needs to be investigated and immediate steps must be taken to stop the decline in sales.

We now compare sales with fixed assets to see how fixed assets are being used in business.

$$\text{Fixed Assets turnover} = \frac{\text{Sales}}{\text{Fixed Assets}}$$

$$2024 = \frac{\text{Rs. } 12,00,000}{\text{Rs. } 1,80,500} = 6.6:1$$

$$2025 = \frac{\text{Rs. } 9,00,000}{\text{Rs. } 2,66,500} = 3.38:1$$

This ratio suggests unsatisfactory situation. The investment in fixed assets has increased during 2025 as compared with 2024,

while sales, have declined from ₹ 12,00,000 to 9,00,000 which has affected the ratio to a great extent. The matter needs to be investigated.

(5) Debtors Ratio: There has been a considerably decline in sales in 2025, while the debtors have increased. This suggests a very unsatisfactory collection policy.

Let us compute Debtors Ratio:

$$2024 = \text{Average Daily Sales} = \frac{\text{Rs. } 12,00,000}{360 \text{ Days}} = ₹ 3,333$$

$$\text{Debtors Ratio} = \frac{\text{Rs. } 60,000}{\text{Rs. } 3,333} = 18 \text{ days}$$

$$2025 = \text{Average Daily Sales} = \frac{\text{Rs. } 9,00,000}{360 \text{ Days}} = ₹ 2,500$$

$$\text{Debtors Ratio} = \frac{\text{Rs. } 87,000}{\text{Rs. } 2,500} = 35 \text{ days}$$

The ratios of two years show a very disturbing situation. The collection period has been doubled. The collection on account of credit sales for last year took only 18 days, while it has increased to 35 days during the year 2025, indicating a slack collection policy. If this situation is not remedied it would lead to great amount of bad debts.

(6) Payments: The current liabilities have been doubled during 2025 as compared with 2024. As the sales have declined, there is no likelihood of increases in purchases, and so the increased creditors indicate that payment is made on time to creditors. This may also result in loss of cash discount.

(7) Returns: From both the viewpoints of Returns on Capital Employed and dividend declared on Ordinary Share Capital, the situation is unsatisfactory:

$$\begin{aligned} \text{For 2024: Return on Capital Employed} &= \frac{\text{Rs. } 20,000}{\text{Rs. } 2,63,000} \times 100 \\ &= 7.6\% \end{aligned}$$

$$\begin{aligned} \text{For 2025: Return on Capital Employed} &= \frac{\text{Rs. } 12,500}{\text{Rs. } 3,62,500} \times 100 \\ &= 3.5\% \end{aligned}$$

This clearly shows that Return on capital employed is reduced to

less than half. Similar is the position of dividend declared on Ordinary shares. It has been reduced from 10% to 5%. It is totally unsatisfactory. The reason seems to be decline in sales.

(8) Capital Structure: The capital gearing is very high. The preference share capital during 2024 was three times the ordinary share capital and even mortgage loan was equal to ordinary share capital. The loan has increased to three times the ordinary capital. This signifies that most of the profit is distributed by way of Interest and Preference Dividend. The outside debts are in excess of shareholders' funds. In 2025, the owners' funds were ₹ 2,12,500 while the outside liabilities were ₹ 1,90,000. All these suggest a situation of under capitalisation. To remedy this situation, it can be suggested that

- (1) Efforts must be intensified to increase sales considerably
- (2) The collection policy must be strict one
- (3) The production must be increased, as the investment in fixed assets has been made
- (4) Additional equity shares must be issued and mortgage loan must be redeemed.

Illustration 19

Muskan Limited has been in existence for two years. The most important facts from its published accounts are given below.

Particulars	Note No.	1st year (₹)	2nd year (₹)
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Shares of ₹ 100 each		1,00,000	1,00,000
(B) Reserves & Surplus:			
Reserves		10,000	20,000
Profit & Loss A/c		14,000	2,000
[2] Non-Current Liabilities:			
Loans on Mortgage		1,10,000	80,000
[3] Current Liabilities:			
Bank Overdraft		—	20,000
Provision for Taxation		34,000	13,000
Creditors		30,000	90,000
Proposed Dividend		10,000	15,000
TOTAL		3,08,000	3,40,000

[B] Assets:

[1] Non-Current Assets:

Fixed Assets less Depreciation

[2] Current Assets:

Stock-in-trade

Debtors

Cash & Bank Bal.

TOTAL

2,08,000	1,98,000
30,000	60,000
40,000	80,000
30,000	2,000
3,08,000	3,40,000

Profit and Loss Account for Two Years

Cr.

Dr.	Year I	Year II	Particulars	Year I	Year II
Particulars					
To Interest on Mortgage Loan	2,400	4,800	By Balance B/f	—	14,000
To Directors' Remuneration	10,000	30,000	By Profit for the Year		
To Provision for Taxation	34,000	13,000	(after normal running cost and depreciation)	80,400	60,800
To Dividend	10,000	15,000			
To Transfer to Res.	10,000	10,000			
To Balance C/f	14,000	2,000			
80,400	74,800			80,400	74,800

You are informed that the total sales amounted to ₹ 6,00,000 in the first year and ₹ 5,00,000 in the second year. Examine the details from the point of view of (i) Profitability (ii) Solvency position (iii) Sales and (iv) Capital Structure.

Make such other computations as seem expedient to you and write a thorough over-all internal analysis of the company.

Solution:

(A) Profitability Ratios:

(1) Return on Capital Employed =

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

(Here Capital Employed = Share Capital + Reserves + Profit and Loss A/c + Loans on mortgage.

Profit would be before interest, taxes, dividend and transfer to Reserve.

1st Year = ₹ 80,400 – Dir. Remuneration 10,000 = ₹ 70,400

2nd Year = ₹ 60,800 – Dir. Remuneration ₹ 30,000 = ₹ 30,800

1st Year: Return on Capital Employed = $\frac{\text{Rs. 70,400}}{\text{Rs. 2,34,000}} \times 100 = 30.09\%$

2nd Year: Return on Capital Employed = $\frac{\text{Rs. 30,800}}{\text{Rs. 2,02,000}} \times 100 = 15.25\%$

(2) Return on Owners' Funds = $\frac{\text{Net Profit after Taxes}}{\text{Shareholders' Funds}} \times 100$

(Here the Net Profit would be after interest and taxes, so that the actual return available to owners (shareholders) can be ascertained)

1st Year = ₹ 80,400 – 2,400 – 10,000 – 34,000 = ₹ 34,000

2nd Year = ₹ 60,800 – 4,800 – 30,000 – 13,000 = ₹ 13,000

1st Year = $\frac{\text{Rs. 34,000}}{\text{Rs. 1,24,000}} \times 100 = 27.4\%$

2nd Year = $\frac{\text{Rs. 13,000}}{\text{Rs. 1,22,000}} \times 100 = 10.66\%$

(3) Return on Equity Share Capital =

$\frac{\text{Net Profit After Tax - Pref.Div.}}{\text{Equity Share Capital}} \times 100$

(Here only that profit will be taken which is available to equity shareholders. Thus, Net Profit = Profit – Taxes – Interest – Pref. Div.)

1st Year = $\frac{\text{Rs. 34,000}}{\text{Rs. 1,00,000}} \times 100 = 34\%$

2nd Year = $\frac{\text{Rs. 13,400}}{\text{Rs. 1,00,000}} \times 100 = 13\%$

(4) Net Profit Ratio = $\frac{\text{Net Profit (After Tax)}}{\text{Sales}} \times 100$

1st Year = $\frac{\text{Rs. 34,000}}{\text{Rs. 6,00,000}} \times 100 = 5.7\%$

$$\text{2nd Year} = \frac{\text{Rs. 13,400}}{\text{Rs. 5,00,000}} \times 100 = 2.6\%$$

Looking to all the above profitability ratios, it seems the position has deteriorated. The return on capital employed which was 30.09% during the first year has declined to 15.25%. All other profitability ratios have deteriorated considerably.

(B) Solvency Ratios: The first two ratios suggest short-term solvency, while the remaining ratios indicate long-term solvency.

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

$$\text{1st Year} = \frac{\text{Rs. 1,00,000}}{\text{Rs. 74,000}} = 1.35:1$$

$$\text{2nd Year} = \frac{\text{Rs. 1,42,000}}{\text{Rs. 1,38,000}} = 1.03:1$$

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

$$\text{1st Year} = \frac{\text{Rs. 70,000}}{\text{Rs. 74,000}} = 0.95:1$$

$$\text{2nd Year} = \frac{\text{Rs. 82,000}}{\text{Rs. 1,38,000}} = 0.59:1$$

$$(3) \text{ Proprietary Ratio} = \frac{\text{Proprietors' Funds}}{\text{Total Assets}} \times 100$$

$$\text{1st Year} = \frac{\text{Rs. 1,24,000}}{\text{Rs. 3,08,000}} \times 100 = 40.26\%$$

$$\text{2nd Year} = \frac{\text{Rs. 1,22,000}}{\text{Rs. 3,40,000}} \times 100 = 35.88\%$$

$$(4) \text{ Debt-Equity Ratio} = \frac{\text{Long Term Liabilities}}{\text{Shareholders' Funds}} \times 100$$

$$\text{1st Year} = \frac{\text{Rs. 1,10,000}}{\text{Rs. 1,24,000}} \times 100 = 88.71\%$$

$$\text{2nd Year} = \frac{\text{Rs. 80,000}}{\text{Rs. 1,22,000}} \times 100 = 65.57\%$$

$$(5) \text{ Interest Coverage Ratio} = \frac{\text{Profit before interest and Tax}}{\text{Fixed Interest}}$$

(Note: Here Profit should be taken before interest and taxes.)

$$1\text{st Year} = \frac{\text{Rs. } 70,400}{\text{Rs. } 2,400} = 29.33$$

$$2\text{nd Year} = \frac{\text{Rs. } 30,800}{\text{Rs. } 4,800} = 6.42$$

Comment: Both current ratio and liquid ratio have declined during the current year. Not only that, they are very unsatisfactory during the current year. Thus, the working capital position is weak. The working capital position is further burdened due to increase in debtors and stock. Even the Proprietary Ratio and Debt-Equity Ratio do not present a comfortable picture. The deterioration in both ratios during current year is a cause of concern. However, the Interest coverage ratio during both the years seems to be satisfactory.

(C) Sales Ratios:

$$(1) \text{ Stock Turnover} = \frac{\text{Sales}}{\text{Average Stock}}$$

$$1\text{st Year} = \frac{\text{Rs. } 6,00,000}{\text{Rs. } 30,000} = 20$$

$$2\text{nd Year} = \frac{\text{Rs. } 5,00,000}{\text{Rs. } 45,000} = 11.11$$

(In the absence of any information regarding cost of sales, the stock turnover has been calculated with the help of sales only.)

$$(2) \text{ Debtors Ratio} = \frac{\text{Debtors}}{\text{Average Sales}}$$

$$1\text{st Year} = \frac{\text{Rs. } 40,000}{\text{Rs. } 1,667} = 24 \text{ days (Average sales 1,667)}$$

$$2\text{nd Year} = \frac{\text{Rs. } 80,000}{\text{Rs. } 1,389} = 57.6 \text{ days (Average sales 1,389)}$$

$$(3) \text{ Turnover of Total Assets} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$\text{1st Year} = \frac{\text{Rs. 6,00,000}}{\text{Rs. 3,08,000}} = 1.95$$

$$\text{2nd Year} = \frac{\text{Rs. 5,00,000}}{\text{Rs. 3,40,000}} = 1.47$$

(D) Capital Structure Ratios:

$$\text{(1) Capital Gearing Ratio} = \frac{\text{Fixed Interest Bearing Capital}}{\text{Ordinary Capital}} \times 100$$

$$\text{1st Year} = \frac{\text{Rs. 1,10,000}}{\text{Rs. 1,00,000}} \times 100 = 110\%$$

$$\text{2nd Year} = \frac{\text{Rs. 80,000}}{\text{Rs. 1,00,000}} \times 100 = 80\%$$

(2) Capital Employed & Long-term Loan =

$$\frac{\text{Total Capital Employed}}{\text{Long - Term Loan}} \times 100$$

$$\text{1st Year} = \frac{\text{Rs. 1,24,000} + \text{Rs. 1,10,000}}{\text{Rs. 1,10,000}} \times 100 = 212.73\%$$

$$\text{2nd Year} = \frac{\text{Rs. 1,02,000} + \text{Rs. 80,000}}{\text{Rs. 80,000}} \times 100 = 252.5\%$$

Comment: From the viewpoint of capital structure, the position seems to be satisfactory. The ratios have improved during the current year. The final ratio has improved to 252.5% as compared with 203.64% during the previous year. This seems satisfactory.

However, overall, the position of the company is not satisfactory. There has been deterioration in most of the ratios during the second year. The debtors and creditors are increasing, while sale is declining and stock is increasing. All these suggest that the management should be put in the hands of a more efficient person.

Illustration 20

CALCULATION OF MISSING FIGURES

From the following information, make out a statement of proprietor's funds with as many details as possible:

(i) Current ratio 2.5

(ii) Liquid ratio 1.5

- (iii) Proprietary ratio (Fixed assets/Proprietary funds) 0.75
- (iv) Reserves and surplus ₹ 40,000
- (v) Bank overdraft ₹ 10,000, and
- (vi) Working capital ₹ 60,000
- (vii) There is no long-term loan or fictitious asset.

Solution

(1) Current assets

Current ratio = 2.5 (given)

If current ratio is 2.5, it means, current assets are 2.5 and current liabilities are 1

$2.5 - 1 = 1.5 = \text{Working capital i.e., ₹ 60,000}$

$$\text{Current assets} = \frac{\text{Rs. 60,000} \times 2.5}{1.5} = ₹ 1,00,000$$

$$(2) \text{ Current liabilities} = \frac{\text{Rs. 60,000} \times 1.00}{1.5} = ₹ 40,000$$

$$(3) \text{ Creditors} = \text{Current liabilities} - \text{Bank overdraft} = ₹ 40,000 - ₹ 10,000 = ₹ 30,000$$

$$(4) \text{ Liquid assets} = 1.5 \times ₹ 40,000 = ₹ 60,000$$

$$(5) \text{ Stock} = \text{Current assets} - \text{Liquid assets} = ₹ 1,00,000 - 60,000 = ₹ 40,000$$

(6) Proprietary funds to Fixed assets are 1:0.75. It means 0.25 of the Proprietary funds is being used as working capital. Hence Proprietor's

$$\text{funds} = \frac{\text{Rs. 60,000}}{0.25} = ₹ 2,40,000$$

(7) Since reserves and surplus are ₹ 40,000, the paid-up capital will be ₹ 2,00,000.

$$(8) \text{ Fixed assets will be } 0.75 \text{ of } ₹ 2,40,000 = ₹ 1,80,000$$

Statement of Proprietor's Funds

Proprietor's Funds:		Amount (₹)
(i) Equity share capital		2,00,000
(ii) Reserves and surplus		40,000
		2,40,000
Investment of Funds:		
(i) Fixed assets		1,80,000
(ii) Net current assets:		

Current assets: Stock	40,000	
Liquid assets	60,000	
	1,00,000	
Current Liabilities:		
Creditors	30,000	
Bank overdraft	10,000	
	40,000	60,000
		2,40,000

Advantages of Ratio Analysis

As stated earlier, ratio analysis is one of the most important tools of financial analysis. Financial health of a business can be diagnosed by this tool. Such an analysis offers the following advantages:

- 1. Useful in analysis of financial statements** Ratio analysis is the most important tool available for analysing the financial statements, i.e., Profit and Loss Account and Balance Sheet. Such analysis is made not only by the management but also by outside parties like bankers, creditors and investors.
- 2. Useful in improving future performance** Ratio analysis indicates the weak spots of the business. This helps management in overcoming such weaknesses and improving the overall performance of the business in future.
- 3. Useful in inter-firm comparison** Comparison of the performance of one firm with another can be made only when absolute data is converted into comparable ratios. If A firm is earning a net profit of ₹ 50,000 while another firm B is earning ₹ 1,00,000, it does not necessarily mean that firm B is better off unless this profit figure is converted into a ratio and then compared.
- 4. Useful in judging the efficiency of a business** As stated earlier, accounting ratios help in judging the efficiency of a business. Liquidity, solvency and profitability of a business can be easily evaluated with the help of various accounting ratios, like current ratio, liquid ratio, debt-equity ratio and net profit ratio. Such an evaluation enables the management to judge the operating efficiency of the various aspects of the business.
- 5. Useful in simplifying accounting figures** Complex accounting data presented in Profit and Loss Account and Balance Sheet is simplified, summarized and systematized with the help of ratio analysis, so as to make it easily

understandable. For example, gross profit ratio, net profit ratio, operating ratio, etc., give a more easily understandable picture of the profitability of a business than the absolute profit figures.

Limitations of Ratio Analysis

Ratio analysis is a very useful technique. But one should be aware of its limitations as well. The following limitations should be kept in mind while making use of ratio analysis in interpreting the financial statements:

- 1. Reliability of ratios depends upon the correctness of the basic data** Ratios obviously will be only as reliable as the basic data on which they are based. If the Balance Sheet or Profit and Loss Account figures are themselves unreliable, it will be a mistake to put any reliance on the ratios worked out on the basis of that Balance Sheet or Profit and Loss Account.
- 2. An individual ratio may by itself be meaningless** Except in a few cases, an accounting ratio may by itself be meaningless and acquires significance only when compared with relevant ratios of other firms or of the previous years. In fact, ratios yield their best advantage on comparison with other similar firms; also if ratios for a year are compared with ratios in the previous years it will be a useful exercise. Comparison is the essential requirement for using ratios for interpreting a given situation in a firm or industry.
- 3. Ratios are not always comparable** When the ratios of two firms are being compared, it should be remembered that different firms may follow different accounting practices. For example, one firm may charge depreciation on straight line basis and the other on diminishing value. Similarly, different firms may adopt different methods of stock valuation. Such differences will not make some of the accounting ratios strictly comparable. However, use of accounting standards makes these ratios comparable.
- 4. Ratios sometimes give a misleading picture** One company produces 500 units in one year and 1,000 units the next year the progress is 100%. Another firm produces 4,000 units in one year and 5,000 in the next year, the progress is 25%. The second firm will appear to be less active than the first firm, if only the rate of increase or ratio is compared. It will be much more useful if absolute figures are also compared along with rate of increase — unless the firms being compared are equal in all respects. In fact, one should be extremely careful while comparing the results of one firm with those of another firm if the two figures

differ in any significant manner, say in size, location, degree of automation or mechanization.

5. **Ratios ignore qualitative factors** Ratios are as a matter of fact, tools of quantitative analysis. It ignores qualitative factors which sometimes are equally or rather more important than the quantitative factors. As a result of this, conclusions from ratio analysis may be distorted. For example, despite the fact that credit may be granted to a customer on the basis of information regarding the financial position of business as disclosed by certain ratios, but the grant of credit ultimately depends upon the credit standing, reputation and managerial ability of the customer, which cannot be expressed in the form of ratios.
6. **Change in price levels makes ratio analysis ineffective** Changes in price levels often make comparison of figures for a number of years difficult. For example, the ratio of sales to fixed assets in 2003 would be much higher than in 1995 due to rising prices because fixed assets are still being expressed on the basis of cost incurred a number of years ago while sales are being expressed at their current prices.
7. **There is no single standard for comparison** Ratios of a company have meaning only when they are compared with some standard ratios. Circumstances differ from firm to firm and the nature of each industry is different. Therefore, the standards will differ for each industry and the circumstances of each firm will have to be kept in mind. It is difficult to find out a proper basis of comparison. Therefore, the performance of one industry may not be properly comparable with that of another. Usually it is recommended that ratios should be compared with the average of the industry. But the industry averages are not easily available.
8. **Ratios based on past financial statements are no indicators of future** Accounting ratios are calculated on the basis of financial statements of past years. Ratios thus indicate what has happened in the past. Since past is quite different from what is likely to happen in future, it is difficult to use ratios for forecasting purposes. The financial analyst is more interested in what will happen in future. The management of a company has information about the company's future plans and policies and is, therefore, able to predict future to a certain extent. But an outsider analyst has to rely only on the past ratios which may not necessarily reflect the firm's future financial position and performance.

QUESTION BANK

Short Questions

1. What is meant by Financial Statement Analysis?
2. Define Accounting Ratio.
3. What is Common-Size Statement?
4. State any two objectives of Financial Statements.
5. What is Current Ratio? Give its formula.
6. What is Trend Analysis?
7. State any two limitations of Accounting Ratios.

Long Questions

1. What do you mean by Financial Statements? Discuss its objectives.
2. Discuss any two tools of Financial Analysis.
3. Explain the advantages and disadvantages of Financial Statement Analysis.
4. What is Common-Size Statement? Explain it with illustration.
5. What is Comparative Financial Statement? Explain it with illustration.
6. What is Trend Analysis? Explain it with illustration.
7. What are Accounting Ratios? Discuss their utility and limitations.
8. Discuss the importance of Accounting Ratios in interpretation of Financial Statements. Explain with illustrations.
9. Discuss the limitations of Accounting Ratios.
10. Discuss the importance of Accounting Ratios.

Practice Examples

1. Prepare Vertical Analysis (Common size) on Vault Ltd. Profit and Loss Account.

Vault Ltd Profit & Loss Account In ₹ crore

Particulars	Mar '25	Mar '24
Revenue From Operations [Gross]	46,320	45,220
Less: Excise/Service Tax/Other Levies	1,190	790
Revenue From Operations [Net]	45,140	44,430
Other Operating Revenues	480	560
Total Operating Revenues	45,620	45,000
Other Income	3,010	2,480
Total Revenue	48,630	47,480

EXPENSES

Cost of Materials Consumed	13,120	13,180
Purchase of Stock-In Trade	4,290	4,300
Changes In Inventories of FG, WIP And Stock-In Trade	-180	-180
Employee Benefit Expenses	2,660	2,730
Finance Costs	60	30
Depreciation and Amortisation Expenses	1,560	1,310
Other Expenses	7,820	7,660
Total Expenses	29,330	29,040
Profit/Loss Before Exceptional, Extra-Ordinary Items and Tax	19,300	18,440
Exceptional Items	-130	0
Profit/Loss Before Tax	19,170	18,440
Total Tax Expenses	4,030	5,980
Profit/Loss for the Period	15,140	12,460

Make Interpretations on the following:

1. Cost of Material Consumed
 2. Employee Cost
 3. Finance Cost
 4. Depreciation
2. Prepare Trend Analysis on given key financial element for ITC and Comment on—
1. Receivable Management
 2. Payable Management
 3. Fixed Asset Utilization
 4. Inventory Management

ITC Balance Sheet — in ₹ Cr. —

Particulars	Mar '25	Mar '24	Mar '23	Mar '22	Mar '21
Total Shareholders' Funds	64,030	57,950	51,400	45,340	32,930
Total Non-Current Liabilities	2,120	2,230	2,120	2,040	2,000
Total Current Liabilities	9,090	9,620	8,860	6,830	14,590
Fixed Assets	23,300	21,890	20,590	18,420	16,710
Non-Current Investments	13,460	14,070	13,490	8,490	6,390
Inventories	8,040	7,590	7,240	7,860	8,520

Financial Statement Analysis

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Trade Receivables	2,090	3,650	2,360	2,210	1,690
Cash and Cash Equivalents	6,840	3,770	2,590	2,750	6,560
Short Term Loans And Advances	0	10	0	0	500
Total Current Assets	36,510	29,570	24,500	24,540	24,130
Revenue From Operations [Net]	45,140	44,430	40,250	39,640	36,480
Total Operating Revenues	45,620	45,000	40,630	40,090	36,840
Total Expenses	29,330	29,040	26,320	26,570	23,680
Profit/Loss Before Tax	19,170	18,440	16,850	15,500	14,960
Cost of Materials Consumed	13,120	13,180	11,760	11,770	11,050
Purchase of Stock-In Trade	4,290	4,300	2,990	3,570	2,590
Finance Costs	60	30	90	20	50
Depreciation and Amortisation Expenses	1,560	1,310	1,150	1,040	1,030

3. Prepare Comparative Financial Statement Analysis on Nippon Ltd Balance Sheet as of March 31, 2025, and March 31, 2014, and Interpret the following:

1. Fixed Assets
2. Investments
3. Current Assets
4. Shareholder's Funds
5. Reserves

ITC Balance Sheet — in ₹ Cr. —

Particulars	Mar '25	Mar '24
EQUITIES AND LIABILITIES		
SHAREHOLDERS' FUNDS		
Equity Share Capital	1,230	1,230
Reserves and Surplus	60,780	54,730
Employees Stock Options	2,020	2,000
Total Shareholders' Funds	64,030	57,950
NON-CURRENT LIABILITIES		
Long Term Borrowings	10	10
Deferred Tax Liabilities [Net]	1,620	2,040
Other Long-Term Liabilities	350	40
Long Term Provisions	140	130
Total Non-Current Liabilities	2,120	2,230

CURRENT LIABILITIES

Short Term Borrowings	—	—
Trade Payables	3,450	3,370
Other Current Liabilities	5,520	6,230
Short Term Provisions	120	30
Total Current Liabilities	9,090	9,620
Total Capital And Liabilities	75,240	69,800

ASSETS

NON-CURRENT ASSETS

Tangible Assets	19,610	17,950
Intangible Assets	520	540
Capital Work-In-Progress	2,780	3,390
Intangible Assets Under Development	0	10
Other Assets	390	0
Fixed Assets	23,300	21,890
Non-Current Investments	13,460	14,070
Long Term Loans And Advances	0	10
Other Non-Current Assets	1,970	4,260
Total Non-Current Assets	38,730	40,230

CURRENT ASSETS

Current Investments	17,180	12,510
Inventories	8,040	7,590
Trade Receivables	2,090	3,650
Cash and Cash Equivalents	6,840	3,770
Short Term Loans and Advances	0	10
Other Current Assets	2,350	2,060
Total Current Assets	36,510	29,570
Total Assets	75,240	69,800

4. The following is the Balance Sheet of Aarti Company Ltd. as on 31/3/2025:

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			

Financial Statement Analysis

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40,000 Equity shares each of ₹ 10/-	4,00,000	
12% Preference shares each of ₹ 100/-		2,50,000
6,50,000		
(B) Reserves & Surplus		
Reserves	2,10,000	
Profit & Loss Account	85,000	2,95,000
[2] Non-Current Liabilities:		
13.5% Debentures		1,50,000
[3] Current Liabilities:		
Creditors	60,000	
Bank Overdraft	30,000	
Outstanding Expenses	15,000	1,05,000
TOTAL		12,00,000
[B] Assets:		
[1] Non-Current Assets:		
(A) Fixed Assets:		
(I) Tangible Assets: Fixed Assets		6,00,000
(II) Intangible Assets: Goodwill		1,00,000
(B) Non-Cur. Investments: Investments		80,000
(C) Other Non-Current Assets:		
Preliminary expenses		12,000
[2] Current Assets:		
Stock	2,25,000	
Debtors	1,68,000	
Cash & Bank	15,000	4,08,000
TOTAL		12,00,000

Details of Profit & Loss Account in brief:

Particulars	₹
Total sales (75% on credit)	6,80,000
Less: Cost of sales	4,00,000
Gross Profit	2,80,000
Less: Depreciation and Managerial Expenses	90,000
Net Profit (Before deducting tax at 50%)	1,90,000

Stock on 31/3/2024 was ₹ 1,75,000.

From the above particulars, compute the following Accounting

Ratios and give in brief their uses. (The necessary calculations should be based on taking 360 days in a year.)

(1) Current Ratio (2) Debtors Ratio (3) Return on Capital Employed (4) Rate of Return on Equity Capital (5) Stock Ratio (6) Net Profit (after tax) Ratio (7) Gearing Ratio. (Guj. Uni., June, 1988)

[Ans.: (1) Current Ratio 3.89 shows sound liquid position. (2) Debtors Ratio 119 days not satisfactory (3) Return on capital employed 19.41% (Profit before interest and tax) (4) Rate of return on Equity capital 16.25% (5) Stock Ratio 2 - unsatisfactory (6) Net Profit (after tax) Ratio 13.97% (7) Gearing Ratio 1: 1.]

5. The information below is taken from the financial records of two companies in the same industry:

Particulars	Ramesh Ltd. (₹)	Suresh Ltd. (₹)
Total Sales (out of which 20% are cash sales)	9,00,000	9,75,000
Cost of goods sold	6,00,000	6,11,000
Administration expenses	75,000	81,250
Interest on debentures	45,000	39,000
Income tax	50%	50%
Equity share-capital	4,50,000	5,20,000
10% Preference share capital	1,50,000	1,30,000
Retained earnings	90,000	1,04,000
Profit & Loss A/c	60,000	65,000
15% Debentures	3,00,000	2,60,000
Creditors	1,20,000	91,000
Bills payable	30,000	39,000
Bank overdraft	75,000	71,500
Fixed Assets	8,25,000	7,86,000
Stock	2,25,000	2,60,000
Debtors	1,65,000	1,62,500
Bills receivable	15,000	19,500
Cash and Bank Balance	45,000	52,000

From the above information, calculate the following accounting ratios for both the companies and make brief comment on each of them: (1) Net profit ratio (2) Liquid ratio (3) Debtors ratio (360 days to be taken for the year) (4) Debt-equity ratio (on basis of long-term debt) (5) Capital Gearing ratio

(Guj. Uni., April, 1996)

[Ans.: (1) Net profit ratio: Ram Ltd.: 10% & Shyam Ltd.: 12.5%; (2) Liquid ratio: Ram Ltd.: 1:1 & Shyam Ltd.: 1.16:1; (3) Debtors ratio: Ram Ltd.: 90 Days & Shyam Ltd.: 84 Days; (4) Debt-equity ratio: Ram Ltd.: 40% & Shyam Ltd.: 31.75%; (5) Capital Gearing ratio: Ram Ltd.: 1:1 & Shyam Ltd.: 0.75:1.]

6. The following balances are extracted from the books of Shree Atul bhai on 31/12/2025:

Particulars	₹	Particulars	₹
Total Sales	4,54,000	Salary	12,000
Debtors	64,000	Closing stock	40,000
Creditors	30,000	Sales Return	4,000
Advertisement Exp.	3,000	Cash balance	16,000
Rent	7,000	Bills Receivable	6,000
Depreciation	5,000	Cash Purchases	90,000
Stock (1/1/2025)	20,000	Salesman's Travelling Exp.	3,000
Cash Sales	30,000	Purchase Returns	10,000
Total Purchases	3,90,000	Bills Payable	31,000
Stationery	5,000	Unpaid Salary	3,000
Postage	2,000	Prepaid Rent	2,000
Salesmen's Commission	8,000		

From the above information you are required to calculate the following ratios. (1) Gross Profit Ratio, (2) Stock Turnover Ratio, (3) Operating Ratio, (4) Debtors Ratio (300 days), (5) Net Profit Ratio, (6) Current Ratio, (7) Creditors Velocity. (Sau. Uni., April, 1997)

[Ans.: (1) Gross Profit Ratio 20% ($90,000 \times 100 / 4,50,000$); (2) Stock Turnover Ratio 12 times ($3,60,000 / 30,000$); (3) Operating Ratio 90% ($3,60,000 + 45,000 \times 100 / 4,50,000$); (4) Debtors Ratio 50 days ($64,000 + 6,000 \times 300 / 4,20,000$); (5) Net Profit Ratios 10% ($45,000 \times 100 / 4,50,000$); (6) Current Ratio 2:1 ($1,28,000 / 64,000$); (7) Creditors Velocity 63 days ($30,000 + 31,000 \times 300 / 2,90,000$).

Note: Gross Profit ₹ 90,000 will be ascertained by preparing Trading A/c; Net Profit ₹ 45,000 will be found out by preparing Profit and Loss A/c; Cost of goods sold ₹ 3,60,000, Operating Expenses ₹ 45,000; Net Sales ₹ 4,50,000, Current Assets ₹ 1,28,000, Current liabilities ₹ 64,000, Net credit sales ₹ 4,20,000 and Net Credit Purchases ₹ 2,90,000.]

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7. Following is the Profit and Loss Account and Balance Sheet of Alankaar Ltd. for the year ended 31/3/2025:

Particulars		₹
Sales		3,00,000
Less: Cost of Goods Sold		2,58,000
* Gross Profit *		42,000
Less: Operating Expenses:		
Selling expenses	2,200	
Office expenses	4,000	
Rent expense (office)	2,800	
Depreciation	10,000	19,000
		23,000
Add: Other Income: Interest on securities		1,500
		24,500
Less: Other Expenses:		
Interest on bank overdraft	300	
Interest on debentures	4,200	4,500
* Profit Before Tax *		20,000
Less: Tax @ 50%		10,000
* Profit After Tax *		10,000

Balance Sheet as on 31/3/2025

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Share Capital		50,000	
7% Preference Share Capital		10,000	60,000
(B) Reserves & Surplus.			40,000
[2] Non-Current Liab.: 6% Debentures			70,000
[3] Current Liabilities:			
Creditors		6,000	
Bills Payable		10,000	
Outstanding Exp.		1,000	
Provision for Tax		13,000	30,000
TOTAL			2,00,000

[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets (1,80,000 – Depr. 50,000)			1,30,000
(B) Non-Current Investments			
Investments in Securities			15,000
[2] Current Assets:			
Cash & Bank		5,000	
Debtors		20,000	
Stock		30,000	55,000
TOTAL			2,00,000

Other data: Opening stock: ₹ 90,000.

Calculate: (1) Net Profit Ratio, (2) ROI, (3) Current Ratio, (4) Debt Equity Ratio, (5) Debtors Ratio, (6) Return on equity shareholders' funds. Also comment on the profitability and liquidity in brief.

(Guj. Uni., 2002)

[Ans.: (1) Net Profit Ratio 3.33% ($10,000 \times 100 / 3,00,000$); (2) ROI: 13.53% ($23,000 \times 100 / 1,70,000$), (3) Current Ratio: 1.83 ($50,000 / 30,000$), (4) Debt Equity Ratio 0.77 ($70,000 / 90,000$), (5) Debtors Ratio 24 days, (6) Return on equity shareholders' funds 10.33% ($10,000 - 700 \times 100 / 90,000$).]

8. The following information is taken from the financial accounts of two companies:

Particulars	Priya\ Ltd. (₹)	Riya Ltd. (₹)
Gross Profit	1,92,000	2,24,000
Cost of goods sold	4,48,000	4,16,000
Net Profit (before tax)	64,000	1,02,400
Equity share capital	2,00,000	1,60,000
Reserves	50,800	1,28,200
Sundry creditors	60,000	80,000
Bank overdraft	28,000	60,000
Land & Building	1,50,000	1,50,000
Plant & Machinery	1,70,000	1,60,000
Stock (closing)	60,500	1,20,400
Prepaid insurance	500	600
Sundry debtors	80,000	72,000
Cash	35,000	17,000
Preliminary expenses	800	2,200
10% Debentures	1,60,000	1,32,000

Cost and Management Accounting

Rate of tax is 50%; 25% of sale of Priya Ltd. is cash sale while 60% of sale of Riya Ltd. is on credit. Calculate the following accounting ratios of both the companies from the above information: (1) Current ratio (2) Operating ratio (3) Return on capital employed (4) Debtors ratio (360 days of year) (5) Return on shareholders' fund
South Guj. Uni., April, 2003

Ans.: (1) Current ratio: Priya: 2:1 & Riya: 1.5:1; (2) Operating ratio: Priya: 90% & Riya: 84%; (3) Return on capital employed: Priya: 19.51% & Riya: 27.66%; (4) Debtors ratio: Priya: 60 Days & Riya: 67.5 Days; (5) Return on shareholders' fund: Priya: 12.8% & Riya: 17.9%.]

9. From the following statement of financial position of Rahi Ltd. as at 31st March, 2025, compute following Ratios for the year and make brief comment on each of them.

The Balance Sheets of Rahi Ltd. as on 31/3/2025

Particulars	Note No.	Amount ₹	Amount ₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
30,000 Equity Shares of ₹ 100 each		30,00,000	
20,000, 10% Pref. Shares of ₹ 100		20,00,000	50,00,000
(B) Reserves & Surplus			
General Reserve		10,00,000	
Profit & Loss A/c		6,00,000	16,00,000
[2] Non-Current Liab.: 10% Debentures			5,00,000
[3] Current Liabilities:			
Bank Overdraft		80,000	
Creditors		4,20,000	
Other Liabilities		1,00,000	6,00,000
TOTAL			77,00,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets:			60,00,000
(B) Other Non-Current Assets:			
Fictitious Assets			70,000

[2] Current Assets:			
Closing Stock		5,00,000	
Debtors		8,00,000	
Bills Receivables		50,000	
Cash & Bank Balance		2,80,000	16,30,000
TOTAL			77,00,000

Additional Information:

Sales	₹ 60,00,000
Purchases	₹ 35,00,000
Average Stock	₹ 3,20,000
Sales, administrative and financial expenses	₹ 6,00,000

Assume tax rate at 50%. 360 days to be taken for the year. (1) Gross Profit Ratio (2) Net Profit Ratio (3) Current Ratio (4) Debtors Ratio (5) Stock Turnover Ratio (6) Operating Ratio (7) Rate of Return on Equity shareholders' funds

(Guj. Uni., April, 2004)

[Ans.: Necessary Calculations: (A) Average stock = Opening stock + Closing stock / 2, 3,20,000 = Opening stock + 5,00,000 / 2 = 3,20,000
= Opening stock + 5,00,000 = Opening stock 6,40,000 - 5,00,000 = 1,40,000.

(B) Cost of sales = Opening stock + Purchases - Closing stock, Cost of sales = 1,40,000 + 35,00,000 - 5,00,000 = 31,40,000.

(C) Gross Profit = Sales less cost of Sales, Gross Profit = 60,00,000 - 31,40,000 = 28,60,000.

(D) Net Profit = Gross Profit - Admi. Exp. 28,60,000 - 6,00,000 = 22,60,000 Before tax - 50% tax ₹ 11,30,000 = Net profit after tax ₹ 11,30,000.

(1) Gross Profit Ratio: 47.67% (Gross Profit / Sales × 100, 28,60,000 / 60,00,000 × 100); (2) Net Profit Ratio 18.83%. Net Profit / Sales × 100, 11,30,000 / 60,00,000 × 100 = 18.83%; (3) Current Ratio 2.72:1 (Current Assets / Current liabilities, 16,30,000 / 6,00,000) 4)

Debtors Ratio 51 days $\left(\frac{\text{Debtors} - \text{Bills Receivable}}{\text{Sales}} \times 360 \right); =$

$\frac{\text{Rs. 8,00,000} + \text{Rs. 50,000}}{\text{Rs. 60,00,000}} \times 360 = 51 \text{ days}; (5) \text{ Stock Turnover Ratio}$

9.8 times (Cost of Sales / Average stock, 31,40,000 / 3,20,000 = 9.8

times); (6) Operating ratio 62.33% (Cost of Sales + Operating Exp/
Sales. $\times 100$) = $\frac{\text{Rs. 31,40,000} - \text{Rs. 6,00,000}}{\text{Rs. 60,00,000}} \times 100 = 62.33\%$. (7) Rate

of return on Equity Shareholders' funds 20.53%; (Net Profit - Pref.
Dividend / Equity Shareholders Funds $\times 100$)
 $\frac{\text{Rs. 11,30,000} - \text{Rs. 2,00,000}}{\text{Rs. 45,30,000}} \times 100 = 20.53\%$; Eq. shareholders' funds

= Eq. share capital + Gen. Res. + P and L A/c - Fictitious Assets,
 $30,00,000 + 10,00,000 + 6,00,000 - 70,000 = 45,30,000$);]

10. The B/S of Jayram Ltd. as on 31st Dec., 2025 is as under:

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Share Capital (₹10 each)		1,00,000	
10% Preference Share Capital		40,000	1,40,000
(B) Reserves & Surplus:			
Profit & Loss A/c			50,000
[2] Non-Current Liab.: Mortgage Loan			1,00,000
[3] Current Liabilities: Creditors		60,000	
Tax Payable		50,000	1,10,000
TOTAL			4,00,000
[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets:			
Building (1,00,000 - Depr. 20,000)		80,000	
Plant		1,00,000	1,80,000
[2] Current Assets:			
Stock		1,00,000	
Debtors (last year ₹ 80,000)		60,000	
Short term investments		20,000	
Cash & Bank		40,000	2,20,000
TOTAL			4,00,000

Profit and Loss A/c for the year ended 31/12/2025:

Dr.

Trading & Profit & Loss Account

Particulars	₹	Particulars	Cr. ₹
To Opening Stock	1,00,000	By Sales	5,50,000
To Purchases	2,00,000	By Closing Stock	1,50,000
To Gross Profit	4,00,000		
	7,00,000		
To Operating Expenses	1,50,000	By Gross Profit	7,00,000
To Operating Profit	2,50,000		4,00,000
	4,00,000		
To Interest on loan	65,000	By Operating Profit	4,00,000
To Profit before Tax	1,85,000		2,50,000
	2,50,000		
To Income-tax	95,000	By Profit before Tax	2,50,000
To Net Profit after Tax	90,000		1,85,000
	1,85,000		1,85,000

Calculate: (1) Current ratio; (2) Net profit ratio; (3) Debtors turnover and collection period; (4) Stock turnover; (5) Return on equity shareholders' funds; (6) Creditors turnover and payment period.
Note: 365 days to be taken for the year.

(South Guj. Uni., April, 2004)

[Ans.: (1) Current ratio 2:1 (2,20,000 / 1,10,000). (2) Net Profit ratio 16.36% (90,000 × 100 / 5,50,000), (3) Debtors turnover 7.86 times and collection period 46 days. (4) Stock turnover 1.2 times. (5) Return on equity shareholder's funds 57.33%. (6) Creditors' turnover 3.33 times and payment period 110 days.]

11. Pranav Co.'s financial statements contain the following information:

Particulars	2024 (₹)	2025 (₹)
Current Assets:		
Cash	2,00,000	1,60,000
Debtors (2023: ₹ 2,80,000)	3,20,000	4,00,000
Short-Term Investments	2,00,000	3,20,000
Stock (2023: ₹ 2,20,000)	5,80,000	6,20,000
Total Current Assets	13,00,000	15,00,000
Less: Current Liabilities	5,00,000	5,00,000

Working Capital *	8,00,000	10,00,000
Equity Capital	20,00,000	20,00,000
Retained Earnings	4,00,000	8,00,000
Long-Term Loan	16,00,000	16,00,000
* Capital Employed *	40,00,000	44,00,000
Income Statement		
Particulars	2024 (₹)	2025 (₹)
Sales	20,00,000	40,00,000
Less: Cost of Goods Sold	10,00,000	28,00,000
Gross Profit	10,00,000	12,00,000
Less: Interest on Long-Term Loan	1,60,000	1,60,000
Profit Before Tax	8,40,000	10,40,000
Less: 50% Tax	4,20,000	5,20,000
* Profit After Tax *	4,20,000	5,20,000

From the above information, calculate the following ratios for the year 2024 and 2025:

(1) Gross Profit Ratio, (2) Net Profit Ratio, (3) Current Ratio, (4) Long-Term Debt-Equity Ratio, (5) Return on Capital Employed, (6) Debtors Turnover, (7) Stock Turnover

Ans.: (1) Gross Profit Ratio: 50% ($10,00,000 / 20,00,000 \times 100$) and 30% ($12,00,000 / 40,00,000 \times 100$); (2) Net Profit Ratio: 21% ($4,20,000 / 20,00,000 \times 100$) and 13% ($5,20,000 / 40,00,000 \times 100$); (3) Current Ratio: 2.6 : 1 ($13,00,000 / 5,00,000$) and 3 : 1 ($15,00,000 / 5,00,000$); (4) Long-Term Debt-Equity Ratio: 66.67% ($16,00,000 / 24,00,000 \times 100$) and 57.14% ($16,00,000 / 28,00,000 \times 100$); (5) Return on Capital Employed: 25% ($10,00,000 / 40,00,000 \times 100$) and 27.27% ($12,00,000 / 44,00,000 \times 100$); (6) Debtors Turnover: Sales / Average Debtors: 6.67 Times ($20,00,000 / 3,00,000$) and 11.11 Times ($40,00,000 / 3,60,000$); (7) Stock Turnover: 2.5 Times ($10,00,000 / 4,00,000$) and 4.67 Times ($28,00,000 / 6,00,000$)

12. Find out the following ratios from the Balance Sheet of Aarti Ltd. as on 31/3/2025 and additional details given to you: (1) Stock Turnover Ratio, (2) Ownership Ratio, (3) Current Ratio, (4) Liquid Ratio, (5) Net Profit Ratio, (6) Creditors Velocity Ratio, (7) Rate of Return on Capital Employed, (8) Rate of Return on Equity Capital

Balance Sheet of Aarti Ltd. on 31/3/2025

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Share Capital			4,00,000
(B) Reserves & Surplus			
General Reserve		2,00,000	
Profit & Loss A/c		1,70,000	
			3,70,000
[2] Non-Current Liabilities:			
8% Debentures			2,50,000
[3] Current Liabilities:			
Creditors		1,00,000	
Bills Payable		50,000	
Provident Fund		30,000	
Bank Overdraft (from Dena Bank)		40,000	
Outstanding Expenses		10,000	
			2,30,000
TOTAL			12,50,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets:			
Land & Building		2,50,000	
Plant & Machinery		1,30,000	
			3,80,000
(B) Other Non-Current Assets:			
Discount on Debentures			5,000
[2] Current Assets:			
Temporary Investment		2,70,000	
Stock		1,75,000	
Debtors		2,00,000	
Prepaid Expenses		30,000	
Advance Income Tax		80,000	
Bills Receivable		50,000	
Cash Balance		20,000	
Balance in Bank of Baroda		40,000	
			8,65,000
TOTAL			12,50,000

Additional Information: (1) Cash sale is 20% of total sales. (2) Stock on 1/4/2024 is ₹ 1,25,000. (3) Debtor's ratio is 90 days. Consider 360 days of the year. (4) Gross profit is 40% of sales. (5) Net profit (before interest and tax) is ₹ 2,50,000. (6) Rate of taxation is 50%.

Ans.: Necessary calculation: Credit sales ₹ 10,00,000, Cash sales ₹ 2,50,000, Total sales ₹ 12,50,000, Gross profit ₹ 5,00,000 (40% of ₹ 12,50,000), Cost of goods sold ₹ 7,50,000 (12,50,000 - 5,00,000), Average stock ₹ 1,50,000, Net profit ₹ 1,15,000 (Profit 2,50,000 - Deb. Int. ₹ 20,000 = 2,30,000 - 50% tax ₹ 1,15,000 = 1,15,000), Purchases ₹ 8,00,000 (By preparing Trading Account).

(1) Stock turnover 5 times (7,50,000/1,50,000); (2) Ownership ratio. 61.45% (7,65,000 × 100/12,45,000); (3) Current ratio 3.76:1 (8,65,000/2,30,000); (4) Liquid ratio 3.63:1 (6,90,000/1,90,000); (5) Net profit ratio 9.2% (1,15,000 × 100/12,50,000); (6) Creditors velocity ratio 67.5 day (1,50,000 × 360/8,00,000); (7) Rate of return on capital employed 24.63% (2,50,000 × 100/10,15,000); (8) Rate of return on equity capital 28.75% (1,15,000 × 100/4,00,000)]

13. The following are the Balance Sheets of Kabir Ltd. as on 31/3/2024 and 31/3/2025:

Particulars	Note No.	31/3/2024 ₹	31/3/2025 ₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Share Capital (₹100 each)		5,00,000	6,00,000
10% pref. Share Capital (₹100)		3,00,000	3,00,000
(B) Reserves & Surplus:			
General Reserve		70,000	1,20,000
Profit & Loss A/c		1,30,000	80,000
[2] Non-Current Liabilities:			
12% Debentures		1,00,000	1,00,000
[3] Current Liabilities:			
Bank Overdraft		1,00,000	1,30,000
Creditors		1,20,000	1,50,000
Bills Payable		80,000	1,00,000
TOTAL		14,00,000	15,80,000

[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets:			
Land & Building		5,00,000	6,00,000
Plant & Machinery		3,50,000	4,00,000
Furniture & Fixtures		1,50,000	2,00,000
[2] Current Assets:			
Debtors		1,20,000	2,00,000
Bills Receivables		50,000	50,000
Stock		1,90,000	30,000
Cash & Bank Balance		40,000	1,00,000
TOTAL		14,00,000	15,80,000

Additional Information:

Particulars	31/3/2024	31/3/2025
Total Purchases (Cash Purchases are 2/5 of credit Purchases)	6,30,000	9,80,000
Net Profit (After Interest & Tax, Tax rate 50%)	1,00,000	1,50,000
Credit Sales (75% of Total Sales)	3,00,000	3,60,000

From the above information, calculate the following accounting ratios: (1) Current Ratio, (2) Rate of Return on Capital Employed, (3) Creditors Ratio (360 Days to be taken for the year), (4) Rate of Return on Equity shareholders' Funds, (5) Capital Gearing Ratio, (6) Long Term Funds to Fixed Assets, (7) Net Profit Ratio.

[Ans.: (1) Current Ratio: 1.33 : 1 (4,00,000 / 3,00,000) and 1 : 1 (3,80,000 / 3,80,000); (2) Rate of Return on Capital Employed: 19.27% (PAT ₹ 1,00,000 + Tax ₹ 1,00,000 + Deb. Int. ₹ 12,000 = EBIT ₹ 2,12,000 / 11,00,000 × 100) and 26% (PAT ₹ 1,50,000 + Tax ₹ 1,50,000 + Deb. Int. ₹ 12,000 = EBIT ₹ 3,12,000 / 12,00,000 × 100); (3) Creditors Ratio: 160 Days (2,00,000 / 4,50,000 × 360) and 128.57 = 129 Days (2,50,000 / 7,00,000 × 360); (4) Rate of Ret. on Equity shareholders' Funds: 14.29% (1,00,000 / 7,00,000 × 100) and 18.75% (1,50,000 / 8,00,000 × 100); (5) Capital Gearing Ratio: 0.80 : 1 (4,00,000 / 5,00,000) and 0.67 : 1 (4,00,000 / 6,00,000); (6) Long Term Funds to Fixed Assets: 1.1 : 1 (11,00,000 / 10,00,000) and 1 : 1 (12,00,000 / 12,00,000); (7) Net Profit Ratio: 25% (1,00,000 / 4,00,000 × 100) and 31.25% (1,50,000 / 4,80,000 × 100)]

14. Following is the Trading and Profit & Loss Account of XYZ Trading for the year ended 31st March, 2025:

Trading & Profit & Loss Account

Dr.	₹	Particulars	₹	Cr.
To Stock (1/4/2024)	75,000	By Sales	5,00,000	
To Purchases	3,10,000	By Stock (31/3/2025)	1,00,000	
To Freight	15,000			
To Gross Profit	2,00,000			
	6,00,000		6,00,000	
To Administrative Exp.	85,000	By Gross Profit	2,00,000	
To Selling Expenses	40,000	By Interest on		
To Financial Expenses	6,000	Investments	5,000	
To General Expenses	3,000			
To Net Profit	71,000			
	2,05,000		2,05,000	

Calculate: (1) Gross Profit Ratio, (2) Net Profit Ratio, (3) Administrative Expenses Ratio, (4) Selling Expenses Ratio, (5) Operating Ratio. (South Guj. Uni., April, 2011)

[Ans.: (1) Gross Profit Ratio: 40% ($2,00,000 \times 100 / 5,00,000$) (2) Net Profit Ratio: 14.20% ($71,000 \times 100 / 5,00,000$) (3) Administrative Expenses Ratio: 17% ($85,000 \times 100 / 5,00,000$) (4) Selling Expenses Ratio: 8% ($40,000 \times 100 / 5,00,000$) (5) Operating Ratio: 86.80% ($(3,00,000 + 1,34,000) \times 100 / 5,00,000$), Cost of goods sold = Sales - Gross Profit = $5,00,000 - 2,00,000 = 3,00,000$, Operating Expenses: Admi. Exp. ₹ 85,000 + Selling Exp. 40,000 + Financial Exp. 6,000 + General Exp. 3,000 = 1,34,000]

15. Calculate: (1) Proprietary Ratio, (2) Long term Debt Equity Ratio, (3) Current Ratio, (4) Liquid Ratio, (5) Dividend Per Share (DPS), (6) Return on Capital Employed from the following information and interpret them.

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Shares of ₹ 10 each			1,38,000
(B) Reserves & Surplus			
Capital Reserve		2,400	
General Reserve		33,500	
Profit & Loss A/c		37,000	72,900
[2] Non-Current Liab.: 15% Debentures			30,000
[3] Current Liabilities:			
Bills Payable		15,600	
Bank Overdraft		30,800	
Creditors		12,700	
Outstanding Expenses		3,000	62,100
TOTAL			3,03,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets:			
Machinery			2,28,000
(B) Non-Current Invt.: Investments			12,000
(C) Other Non-Current Assets:			
Preliminary expenses			600
[2] Current Assets:			
Stock		33,000	
Debtors		21,900	
Cash & Bank Balance		6,800	
Prepaid Expenses		700	62,400
TOTAL			3,03,000

Additional Information: (1) Dividend paid ₹ 27,600 (2) Earnings before interest and taxes ₹ 1,20,000 (3) Tax Rate 50%

[Ans.: (1) Proprietary Ratio: 0.697 or 69.7% (2,10,900 / 3,02,400) (2) Long term Debt-Equity Ratio: 14.27% (30,000 × 100 / 2,10,300) (3) Current Ratio: 1:1 (62,400/62,100) (4) Liquid Ratio: 0.46:1 (28,700 / 62,100) (5) Dividend per share (DPS) ₹ 2 (₹ 27,600 / 13,800 shares) (6) Return on Capital Employed 49.94% (1,20,000 × 100 / 2,40,300)]

16. Two years' Balance sheets of Manisha Ltd. are as follows:

Particulars	Note No.	31/3/2024 ₹	31/3/2025 ₹
[A] Equity and Liabilities:			[1]
Shareholders' Funds:			(A) Share
Capital:			
Equity Share Capital (₹100)		80,000	1,20,000
10% Preference Share Capital		40,000	40,000
(B) Reserves & Surplus:			
General Reserve		24,000	24,000
Profit & Loss A/c		16,000	—
[2] Non-Current Liab.: 12% Debentures		80,000	40,000
[3] Current Liabilities: Bank Overdraft		8,000	16,000
Creditors		24,000	28,000
Bills Payable		8,000	20,000
Outstanding Exp.		4,000	8,000
TOTAL		2,84,000	2,96,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets:			
Tangible Assets: Land & Building		80,000	72,000
Machinery		72,000	72,000
(B) Other Non-Current Assets:			8,000
Profit & Loss A/c		—	—
[2] Current Assets: Stock		60,000	72,000
Debtors		42,400	24,000
Bills Receivables		16,000	9,600
Cash & Bank		13,600	38,400
TOTAL		2,84,000	2,96,000

Additional Information:

Particulars	2023-'24 (₹)	2024-'25 (₹)
(1) Sales	2,92,000	1,75,200
(2) Cost of Goods Sold	1,75,200	1,16,800
(3) Net Profit (Before Pref. Dividend)	28,000	38,000
(4) Stock on 1/4/2023 ₹ 56,800		

Calculate the following ratios: (1) Current Ratio; (2) Liquid Ratio; (3) Gross Profit Ratio; (4) Debtors Ratio (365 days); (5) Stock Turnover Ratio; (6) Earning Per Share; (7) Rate of return on equity Shareholders' Fund

[Ans.: (1) Current Ratio: 2023-'24: 3:1 (1,32,000 / 44,000) & 2024-'25: 2:1 (1,44,000 / 72,000); (2) Liquid Ratio: 2023-'24: 1.64:1 (72,000 / 44,000) & 2024-'25: 1:1 (72,000 / 72,000); (3) Gross Profit Ratio: 2023-'24: 40% (1,16,800 / 2,92,000 × 100) & 2024-'25: 33.33% (58,400 / 1,75,200 × 100); (4) Debtors Ratio: 2023-'24: 73 Days (58,400 / 2,92,000 × 365) & 2024-'25: 70 Days (33,600 / 1,75,200 × 365); (5) Stock Turnover Ratio: 2023-'24: 3 Times (58,400 / 1,75,200) & 2024-'25: 1.77 Times (1,16,800 / 66,000 × 365); (6) Earning Per Share: 2023-'24: ₹ 30 (24,000 / 800 Shares) & 2024-'25: ₹ 28.33 (34,000 / 1,200 Shares); (7) Rate of return on equity Shareholders' Fund: 2023-'24: 20% (24,000 / 1,20,000 × 100) & 2024-'25: 25% (34,000 / 1,36,000 × 100).]

17. You have been supplied financial information for Nidhi Ltd.

Balance Sheet as on 31/3/2025

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Share Capital (₹ 10 each)		8,00,000	
10% Pref. Share Capital (₹ 100 each)		2,40,000	10,40,000
(B) Reserves & Surplus			
Reserves		70,000	
Profit & Loss A/c		50,000	1,20,000
[2] Non-Current Liabilities:			
12% Debentures			2,40,000
[3] Current Liabilities:			

Creditors	1,00,000	
Bills Payable	50,000	
Unpaid Expenses	40,000	
Bank Overdraft	90,000	2,80,000
TOTAL		16,80,000
[B] Assets:		
[1] Non-Current Assets:		
(A) Fixed Assets:		
Land & Building	5,00,000	
Plant & Machinery	4,00,000	
Furniture	1,20,000	10,20,000
[B] Other Non-Current Assets:		
Fictitious Assets		20,000
[2] Current Assets:		
Debtors	1,40,000	
Stock	2,10,000	
Cash	80,000	
Other Current Assets	2,10,000	6,40,000
TOTAL		16,80,000

Statement of Profit for the year ended 31st March 2025

Particulars	₹
Total Sales (out of which 90% are Credit Sales)	19,20,000
Less: Cost of goods sold	11,52,000
Gross Profit	7,68,000
Less: Operating expenses	3,12,000
Net Profit	4,56,000
Less: Taxes 50%	2,28,000
Net Profit After Taxes	2,28,000

Opening Stock ₹ 2,20,000.

Calculate the following ratios: (1) Gross Profit Ratio, (2) Current Ratio, (3) Stock Turnover Ratio, (4) Debtors Ratio (360 Days), (5) Debt-Equity Ratio, (6) Proprietary Ratio, (7) Rate of Return on Proprietor's Funds (8) Net Profit Ratio.

[Ans.: (1) Gross Profit Ratio: 40% ($7,68,000 / 19,20,000 \times 100$); (2) Current Ratio: 2.29 ($6,40,000 / 2,80,000$); (3) Stock Turnover Ratio: 5.36 Times ($11,52,000 / 2,15,000$); (4) Debtors Ratio: $29.17 = 29$ Days ($1,40,000 / 17,28,000 \times 360$); (5) Debt-Equity Ratio: 21.05 ($2,40,000 / 11,40,000 \times 100$); (6) Proprietary Ratio: 68.67% ($11,40,000 / 16,60,000 \times 100$); (7) Rate of Return on Proprietor's Funds: 20% ($2,28,000 / 11,40,000 \times 100$); (8) Net Profit Ratio: 11.88% ($2,28,000 / 19,20,000 \times 100$)]

18. The following are the Summarized Balance Sheets of Ami Ltd.:

Particulars	Note No.	31/3/2024 ₹	31/3/2025 ₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital:			
Equity Share Capital (₹100 each)		10,00,000	13,20,000
(B) Reserves & Surplus		5,12,500	7,56,000
[2] Non-Current Liabilities:			
12% Debentures		5,00,000	6,00,000
[3] Current Liabilities:			
Creditors		3,00,000	1,60,000
Bills Payable		50,000	40,000
Workers Profit Sharing Fund		30,000	20,000
Staff Pension Fund		70,000	80,000
Bank Overdraft		37,500	24,000
TOTAL		25,00,000	30,00,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets:			
Land & Building		8,00,000	12,00,000
Plant & Machinery		4,00,000	6,00,000
Furniture		1,56,250	1,09,200
(B) Other Non-Current Assets:			
Preliminary Expenses		12,500	36,000
[2] Current Assets:			
Debtors		3,00,000	4,00,000
Bills Receivables		1,80,000	1,76,000

Stock		3,87,500	3,48,000
Prepaid Expenses		32,500	40,800
Cash		2,31,250	90,000
TOTAL		25,00,000	30,00,000

Additional Information:

Particulars	2023-24	2024-25
Total Sales (Cash Sales are 1/4th of credit Sales)		
Gross Profit	30,00,000	36,00,000
Net Profit (Before interest & tax)	8,00,000	10,80,000
(Tax rate 50%)		
Stock on 1/4/2023 ₹ 1,62,500	4,00,000	5,80,800

From the above information, calculate the following accounting ratios for both the years:

- (1) Net Profit Ratio, (2) Current Ratio, (3) Stock Turnover Ratio, (4) Proprietary Ratio, (5) Return on Capital Employed, (6) Debtors Ratio (300 days).

Ans.: (1) Net Profit Ratio: 5.67% (Profit ₹ 4,00,000 - Deb. Int. ₹ 60,000 = ₹ 3,40,000 - 50% Tax = Net Profit ₹ 1,70,000 / Sales ₹ 30,00,000 × 100 = 5.67%) and 7.07% (Profit ₹ 5,80,800 - Deb. Int. ₹ 72,000 = ₹ 5,08,800 - 50% Tax = Net Profit ₹ 2,54,400 / Sales ₹ 36,00,000 × 100 = 7.07%); (2) Current Ratio: 2.32 : 1 (11,31,250 / 4,87,500) and 3.26 : 1 (10,54,800 / 3,24,000); (3) Stock Turnover Ratio: 8 Times (22,00,000 / 2,75,000) and 6.85 Times (25,20,000 / 3,67,750); (4) Proprietary Ratio: 60.30% (15,00,000 / 24,87,500 × 100) and 68.83% (20,40,000 / 29,64,000 × 100); (5) Return on Capital Employed: 20% (4,00,000 / 20,00,000 × 100) and 22% (5,80,800 / 26,40,000 × 100); (6) Debtors Ratio: 60 Days (4,80,000 / 24,00,000 × 300) and 60 Days (5,76,000 / 28,80,000 × 300)]

19. Ankur Co. Ltd. gives you the following information for the year 2025:

Particulars	₹
Adjusted Purchases	67% of Sales
Net Profit (after 60% tax)	10,00,000
Opening Stock	7,40,000
Closing Stock	6,00,000
Equity Share Capital	40,00,000
10% Preference Share Capital	20,00,000
10% Debentures	6,00,000

10% Long Term Loan	4,00,000
Retained Earning	10,00,000
Current Asset	30,00,000
Fixed Assets	70,00,000
Fictitious Assets	2,00,000

Additional Information: (1) Credit sales are $\frac{3}{5}$ of total sales. (2) Debtor and Bills Receivable are $33\frac{1}{3}\%$ of Current Assets. (3) Stock turnover is 10 times.

Calculate the following ratios: (1) Net Profit Ratio (2) Rate of Return on Capital Employed (3) Rate of Return on Shareholders' Funds (4) Rate of Return on Equity Shareholders Funds (5) Debtors Ratio (consider 360 Days)

[Ans.: (1) Net Profit Ratio: 10% ($10,00,000 / 1,00,00,000$); (2) Rate of Return on Capital Employed: 33.33% ($26,00,000 / 78,00,000 \times 100$); (3) Rate of Return on Shareholders' Funds: 14.71% ($10,00,000 / 68,00,000 \times 100$); (4) Rate of Return on Equity Shareholders Funds: 16.67% ($10,00,000 - 2,00,000 = 8,00,000 / 48,00,000 \times 100$); (5) Debtors Ratio: 60 Days ($10,00,000 / 60,00,000 \times 360$).

Necessary Calculations: (1) Net Profit Before Tax ₹ 25,00,000 ($10,00,000 \times 100 / 40$); (2) Average Stock ₹ 6,70,000 ($7,40,000 + 6,00,000 / 2$); (3) Cost of Sales: ₹ 67,00,000 ($10 = \text{Cost of Sales} / 6,70,000$); (4) Cost of Sales = Adjusted Purchases: ₹ 67,00,000; (5) Sales ₹ 1,00,00,000 ($67,00,000 \times 100 / 67$); (6) Credit Sales ₹ 60,00,000 ($1,00,00,000 \times 3 / 5$); (7) Debtors + B/R = $30,00,000 \times 1 / 3 = 10,00,000$; (8) EBIT ₹ 26,00,000 ($25,00,000 + 60,000 + 40,000$); (9) Capital Employed = Equity Share Capital + Pref. Share Capital + Debentures + Loan + Retained Earnings - Fictitious Assets = ₹ 78,00,000; (10) Shareholders' Funds ₹ 68,00,000; (11) Equity Share holders' Funds ₹ 48,00,000]

20. The Trading and Profit & Loss A/c of Anupam Ltd. on 31/3/2025 is given below:

Particulars	₹	₹
Net Sales (All Credit Sales)		9,00,000
Less: Cost of Sales:		
Opening Stock	1,25,000	
+ Credit Purchases	7,20,000	
	8,45,000	
- Closing Stock	1,70,000	6,75,000
Gross Profit		2,25,000

Less: Administrative Expenses	60,000	
Selling Expenses	42,000	
Interest on Bank Loan	9,000	1,11,000
* Net Profit (Before Tax of 50%) *		1,14,000

Balance Sheet as on 31st March, 2025

Particulars	₹	₹
Sources of Funds:		
Equity Share Capital	2,50,000	
10% Preference Share Capital	1,25,000	3,75,000
Add: Reserve Fund	1,05,000	
Profit & Loss Account	45,000	
Workmen's Compensation Fund	25,000	1,75,000
Proprietary Fund		5,50,000
Add: 15% Bank Loan		60,000
Capital Employed		6,10,000
Application of Funds:		
Fixed Assets less Depreciation		3,80,000
Current Assets, Loans and Advances:		
Debtors	1,20,000	
Bills Receivables	50,000	
Stock	1,70,000	
Cash & Bank	60,000	4,00,000
Less: Current Liabilities:		
Creditors	1,20,000	
Bank Overdraft	30,000	
Provident Fund	20,000	1,70,000
Capital Employed		6,10,000

From the above information, calculate the following ratios: (1) Net Profit Ratio (2) Operating Ratio (3) Stock Turnover Ratio (4) Debtors Ratio (360 Days) (5) Liquid Ratio (6) Proprietary Ratio (7) Debt-Equity Ratio

[Ans.: (1) Net Profit Ratio: 6.33% ($57,000 / 9,00,000 \times 100$); (2) Operating Ratio: 86.33% ($6,75,000 + 1,02,000 = 7,77,000 / 9,00,000 \times 100$); (3) Stock Turnover Ratio: 4.58 Times ($6,75,000 / 1,47,500$); (4) Debtors Ratio: 68 Days ($1,70,000 / 9,00,000 \times 360$); (5) Liquid Ratio: 1.35 : 1 ($2,30,000 / 1,70,000$); (6) Proprietary Ratio: 70.51%

(5,50,000 / 7,80,000 × 100); (7) Debt-Equity Ratio: 10.91% (60,000 / 5,50,000 × 100)]

21. Following is the Balance Sheet of Adarsh Ltd. as on 31/3/2025:

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Share Capital (₹ 10 each)		5,00,000	
15% Preference Shares		2,00,000	7,00,000
(B) Reserves & Surplus			4,00,000
[2] Non-Current Liabilities:			
12% Debentures			1,50,000
[3] Current Liabilities:			
Creditors		90,000	
Bills Payable		10,000	
Provision for Tax		50,000	1,50,000
TOTAL			14,00,000
[B] Assets:			
[1] Non-Current Assets:			
(A) Fixed Assets			7,00,000
(B) Other Non-Current Assets:			
Preliminary Expenses			40,000
[2] Current Assets:			
Stock		2,20,000	
Debtors		2,50,000	
Bills Receivables		20,000	
Cash & Bank		1,45,000	
Prepaid Expenses		25,000	6,60,000
TOTAL			14,00,000

Other Information:

Sales	₹ 40,00,000
Cost of Goods Sold	₹ 25,00,000
Earnings before interest and taxes	₹ 5,00,000
Rate of tax	30%

Compute the following ratios and give your comment on each ratio:
 (1) Current Ratio (2) Liquid Ratio (3) Stock Turnover Ratio (4) Return on Capital Employed (5) Earnings per share.

[Ans.: (1) Current Ratio: 4.4:1 (6,60,000 / 1,50,000); (2) Liquid Ratio: 2.77:1 (4,15,000 / 1,50,000); (3) Stock Turnover Ratio: 11.36 Times (25,00,000 / 2,20,000); (4) Ret. on Capital Employed: 41.32% (5,00,000 / 12,10,000 × 100) (5) Earnings per share: ₹ 6.15 (3,07,400 / 50,000)]

22. From the folioing Balance Sheet of ABC Ltd. as on 31/3/2025 and Trading and Profit & Loss Account for the year ending 31/3/2025, calculate the following ratios and discuss it utility:

- (1) Current Ratio (2) Stock Turnover Ratio (3) Dividend Per Share
 (4) Operating Ratio (5) Rate of Return on Equity Share holders' funds
 (6) Net Profit Ratio (7) Capital Gearing Ratio

Dr. **Trading and Profit & Loss Account** Cr.

Particulars	₹	Particulars	₹
To Opening Stock	6,00,000	By Sales	60,00,000
To Purchases	51,60,000	By Closing Stock	6,00,000
To Gross Profit	8,40,000		
	66,00,000		66,00,000
To Administrative Exp.	1,36,000	By Gross Profit	8,40,000
To Interest	1,40,000		
To Selling Exp.	44,000		
To Tax Provision	2,60,000		
To Net Profit	2,60,000		
	8,40,000		8,40,000

Balance Sheet as on 31st March, 2025

Particulars	Note No.	₹	₹
[A] Equity and Liabilities:			
[1] Shareholders' Funds:			
(A) Share Capital			
Equity Share Capital (₹ 10 per share)			10,00,000
10% Preference Share Capital		2,00,000	12,00,000
(B) Reserves & Surplus:			
General Reserve			8,00,000
[2] Non-Current Liabilities:			
10% Debentures			14,00,000
[3] Current Liabilities:			
Creditors		1,20,000	
Proposed Dividend		2,20,000	
Income Tax Provision		2,60,000	6,00,000
TOTAL			40,00,000
[B] Assets:			
[1] Non-Current Assets:			
Fixed Assets			26,00,000
[2] Current Assets:			
Bank Balance		1,00,000	
Cash Balance		3,00,000	
Debtors		4,00,000	
Stock		6,00,000	14,00,000
TOTAL			40,00,000

The company declared dividend on equity capital at 20%.

[Ans.: (1) Current Ratio: 2.33:1 (14,00,000 / 6,00,000); (2) Stock Turnover Ratio: 8.6 Times (51,60,000 / 6,00,000); (3) Dividend Per share: ₹ 2 (2,00,000 / 1,00,000); (4) Operating Ratio: 91.33% (54,80,000 / 60,00,000 × 100); (5) Rate of Return on Equity Share holders' funds: 13.33% (Net Profit ₹ 2,60,000 – Pref. Dividend ₹ 20,000 = ₹ 2,40,000 / 18,00,000 × 100); (6) Net Profit Ratio: 4.33% (2,60,000 / 60,00,000 × 100); (7) Capital Gearing Ratio: 1.6:1 (16,00,000 / 10,00,000)]

23. From the following ratios calculated from the accounts of a company and standard ratios of the industry, briefly comment on the financial position of the company with respect to each ratio:

Ratios	Actual Ratios	Standard Ratios
(1) Current Ratio	4:1	2:1
(2) Debtors Ratio	60 Days	75 Days
(3) Gross Profit Ratio	40%	40%
(4) Net Profit Ratio	20%	25%

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Ans.: (1) The current ratio is very high as compared to the standard, showing a very comfortable liquid position for creditors; (2) The debtors velocity is much lower than the standard which is very comfortable as the company is able to collect its books debtors much earlier; (3) The gross profit ratio is on par with that of standard prevailing in the business; (4) The net profit ratio however is very unsatisfactory when gross profit rate is taken into account.]

24. Details of Moon Ltd as on 31-03-26 are as follow:

I. Equity and Liabilities	Rs.
1. Shareholder's fund.	
a. Share Capital	
Equity share capital	10,00,000
10% Preference share capital	4,00,000
b. Reserves	7,00,000
2. Non-current liabilities	
a. Long term borrowings	
15% Debentures	5,00,000
3. Current liabilities	
a. Short term borrowings	
Bank-overdraft	1,60,000
b. Trade payable	
Creditors	2,40,000
Total	30,00,000
II. Assets	
1. Non-Current Assets	
a. Fixed assets	20,00,000

b. Non-current investments	2,00,000
c. Other non-current assets (fictitious)	20,000
2. Current assets	
a. Inventory (Stock)	2,00,000
b. Trade receivable	
Debtors	4,60,000
Bills receivable	60,000
c. Cash and cash equivalents	60,000
Total	30,00,000

Find out: (1) Current Ratio (2) Quick Ratio (3) Debt Equity Ratio (4) Proprietary Ratio (5) Long Term Funds to Fixed Assets Ratio (6) Fixed Assets to Proprietary Ratio.

25. Details of ANSH Ltd as on 31-03-26 are as follow:

Equity and Liabilities	Rs.
Shareholder's fund.	
Share Capital	
Equity share capital	20,00,000
10% Preference share capital	20,00,000
Reserves	11,00,000
Non-current liabilities	
Long term borrowings	
10% Debentures	10,00,000
Current liabilities	
Short term borrowings	
Bank-overdraft	1,50,000
Trade payable	
Creditors	1,00,000
Bills payable	45,000
Other current liabilities	
Outstanding expenses	5000
Total	64,00,000
Assets	
Non-Current Assets	
Fixed assets	55,00,000

Other non -current assets (fictitious)	1,00,000
Current assets	
Inventory (Stock)	1,75,000
Trade receivable	
Debtors	3,50,000
Bills receivable	50,000
Cash and cash equivalents	2,25,000
Total	64,00,000

Find out: (1) Current Ratio (2) Liquid Ratio (3) Debt Equity Ratio (4) Proprietary Ratio (5) Long Term Funds to Fixed Assets Ratio (6) Fixed Assets to Proprietary Ratio.

