Accounts

(Part 2) (Chapter – 5) (Accounting Ratios)
(Class 12)

Short Answer Question

Question 1:

What do you mean by Ratio Analysis?

Answer 1:

Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, and profitability by studying its financial statements such as the balance sheet and income statement. It helps us in ascertaining profitability, operational efficiency, and solvency of a firm.

Question 2:

What are the various types of ratios?

Answer 2:

Accounting ratios can be classified as:

1. Traditional Classification
2. Functional Classification

1. **Traditional Classification:** Traditional classification of ratios is done on the basis of the financial statements from which the ratios are calculated. The Traditional Classification further bifurcates accounting ratios on the basis of the accounts to which the elements of a ratio belong. Under the traditional classification, the ratios are classified as:

   a. Income Statement Ratios b. Balance Sheet Ratios c. Composite Ratios

2. **Functional Classification:** There is the classical approach, where ratios are classified on the basis of the accounting statement from where they are obtained. The other is a more functional classification, based on the uses of the ratios and the purpose for which they are calculated. It reflects the functional need and the purpose of calculating ratio. Under the traditional classification, the ratios are classified as:

   a. Liquidity Ratio b. Solvency Ratio c. Activity Ratio d. Profitability Ratio

Question 3:

What relationships will be established to study:

a. Inventory Turnover b. Trade Receivables Turnover

c. Trade Payables Turnover d. Working Capital Turnover

Answer 3:

1. **Inventory Turnover Ratio:** Inventory turnover is a measure of the number of times inventory is sold or used in a time period such as a year. It is calculated to see if a business has an excessive inventory in comparison to its sales level.

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

2. **Debtors Turnover Ratio or Trade Receivables Turnover Ratio:** This ratio is an accounting measure used to measure how effective a company is in extending credit as well as collecting debts. The receivables turnover ratio is an activity ratio, measuring how efficiently a firm uses its assets.

   $$\text{Debtor Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Account Receivable}}$$

3. **Trade Payables Turnover Ratio:** The accounts payable turnover ratio shows investors how many times per period a company pays its accounts payable. In other words, the ratio measures the speed at which a company pays its suppliers. ... Creditors can use the ratio to measure whether to extend a line of credit to the company.

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

4. **Working Capital Turnover Ratio:** This ratio shoes how the company is efficiently utilising the working capital in making sales. It establishes the relationship between net sales and working capital.

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

Question 4:

The liquidity of a business firm is measured by its ability to satisfy its long-term obligations as they become due. What are the ratios used for this purpose?

Answer 4:

It is important for a business to cover all the obligations and hence maintaining liquidity of a business is necessary. The obligation is long term in nature and involves principal amount on the due date and payments of interest. Long term solvency of any business can be calculated on the basis of the following ratios.

1. **Debt-Equity Ratio:** The debt-to-equity ratio is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. Closely related to leveraging, the ratio is also known as risk, gearing or leverage.

$$\text{Debt-Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Equity Shareholders Funds}}$$

2. **Total Assets to Debt Ratio:** Total asset to total debt ratio is a measure of the company's assets that are financed by debt rather than equity. This leverage ratio shows how a company has grown and acquired its assets over time. Creditors use the ratio to see how much debt the company already has and whether the company can repay its existing debt.

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Long –Term Debt}}$$

3. **Interest Coverage Ratio:** The interest coverage ratio is used to determine how easily a company can pay their interest expenses on outstanding debt. The ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) by the company's interest expenses for the same period.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit Before Interest and Tax}}{\text{Interest on Long Term Loan}}$$

Question 5:

The average age of inventory is viewed as the average length of time inventory is held by the firm for which explain with reasons.

Answer 5:

Inventory Turnover Ratio: This ratio is computed to determine the efficiency with which the stock is used. This ratio is based on the relationship between cost of goods sold and average stock kept during the year.

$$\text{Inventory/Stock Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\text{Average Stock}}$$

$$\text{Cost of Goods Sold} = \text{Opening Stock} + \text{Purchases} + \text{Direct Expenses} - \text{Closing Stock}$$

$$\text{Or Cost of Goods sold} = \text{Net Sales} - \text{Gross Profit}$$

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

$$\text{Average Age of Inventory} = \frac{\text{Days in a year}}{\text{Inventory Turnover Ratio}}$$

It shows the rate with which the stock is turned into sales or the number of times the stock in turned into sales during the year. In other words, this ratio reveals the average length of time for which the inventory is held by the firm.

Long Answer Question

Question 1:

What are liquidity ratios? Discuss the importance of current and liquid ratio.

Answer 1:

Liquidity ratios are an important class of financial metrics used to determine a debtor's ability to pay off current debt obligations without raising external capital. Liquidity ratios measure a company's ability to pay debt obligations and its margin of safety through the calculation of metrics including the current ratio, quick ratio, and operating cash flow ratio.

Short-term creditors are interested in ascertaining liquidity ratios for timely payment of their debts.

Liquidity ratio includes : 1. Current Ratio 2. Liquid Ratio or Quick Ratio

1. **Current Ratio:** It explains the relationship between current assets and current liabilities. It is calculated as:

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

Currents Assets are readily converted into cash within a short period of time like, cash in hand, cash at bank, marketable securities, debtors, stock, bills receivables, prepaid expenses. etc.

Current Liabilities are those which are to be repaid in a short period of time, usually within a year like, bank overdraft, bills payables, Short-term creditors, provision for tax, outstanding expenses etc.

Importance of Current Ratio

Current assets are important to businesses because they can be used to fund day-to-day business operations and to pay for the ongoing operating expenses. It helps in assessing the firm's ability to meet its current liabilities on time. The ideal ratio of current assets over current liabilities is 2:1. It means that a company has a good liquidity position and sufficient funds to meet its current liabilities. A high current ratio implies lost investment opportunities and low ratio indicates mismanagement of working capital and lack of liquidity.

2. **Liquid Ratio:** Liquid or quick ratio, also known as the acid-test ratio is a type of liquidity ratio, which measures the ability of a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. It indicates whether a firm has sufficient funds to pay its current liabilities immediately. It is calculated as:

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

Importance of Liquid Ratio

It helps in determining whether a firm has sufficient funds if it has to pay all its current liabilities immediately.

Liquid ratio does not include inventory as it takes more time to convert the inventory into cash. Prepaid expenses are also excluded from liquid assets, since these cannot be converted into cash. The ideal Liquidity Ratio is considered to be 1:1.

Question 2:

How would you study the solvency position of the firm?

Answer 2:

Solvency position can be ascertained with the help of the Solvency Ratios. A solvency ratio measures the extent to which assets cover commitments for future payments, the liabilities. The solvency ratio of a company is the size of its capital relative to all risks it has taken. It is the measures of the long-term financial position. Long-term

obligations include payments of principal and interest amount on the due date. Long term solvency of any business can be calculated on the basis of the following ratios.

1. **Debt-Equity Ratio:** The debt-to-equity ratio is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. Closely related to leveraging, the ratio is also known as risk, gearing or leverage.

$$\text{Debt-Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Equity Shareholders Funds}}$$

2. **Total Assets to Debt Ratio:** Total asset to total debt ratio is a measure of the company's assets that are financed by debt rather than equity. This leverage ratio shows how a company has grown and acquired its assets over time. Creditors use the ratio to see how much debt the company already has and whether the company can repay its existing debt

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Long–Term Debt}}$$

3. **Interest Coverage Ratio:** The interest coverage ratio is used to determine how easily a company can pay their interest expenses on outstanding debt. The ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) by the company's interest expenses for the same period.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit Before Interest and Tax}}{\text{Interest on Long Term Loan}}$$

4. **Proprietary Ratio:** The proprietary ratio (also known as the equity ratio) is the proportion of shareholders' equity to total assets, and provides an estimate of the amount of capitalization currently used to support a business

$$\text{Proprietary Ratio} = \frac{\text{Equity}}{\text{Total Assets}}$$

Question 3:

What are various profitability ratios? How are these worked out?

Answer 3:

Profitability ratios are related to the revenue generated from operations of a business. This ratio is an indicator to the user of financial statements about the financial strength, profitability and operational efficiency of a business. The various important Profitability Ratios are as follows:

1. Gross Profit Ratio
2. Operating Ratio
3. Net Profit Ratio
4. Return on Capital Employed
5. Earnings per Share Ratio
6. Dividend Pay-out Ratio
7. Price Earnings Ratio

1. **Gross Profit Ratio:** Gross profit ratio (GP ratio) is a profitability ratio that shows the relationship between gross profit and total net sales revenue. It is a popular tool to evaluate the operational performance of the business. The ratio is computed by dividing the gross profit figure by net sales

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

$$\text{Gross Profit} = \text{Net Revenue} - \text{Cost of Goods Sold}$$

$$\text{Cost of Goods Sold} = \text{Opening Stock} + \text{Purchases} - \text{Closing Stock}$$

2. **Operating Ratio:** Operating Profit Margin is a profitability or performance ratio that reflects the percentage of profit a company produces from its operations, prior to subtracting taxes and interest charges. It is calculated by dividing the operating profit by total revenue. It is also a measure of operational efficiency of a business.

$$\text{Operating Ratio} = \frac{\text{COGS + Operating Expenses}}{\text{Net Revenue from Operations}} \times 100$$

Cost of Goods Sold = Sales – Gross Profit

3. **Net Profit Ratio:** The net profit percentage is the ratio of after-tax profits to net sales. It reveals the remaining profit after all costs of production, administration, and financing have been deducted from sales, and income taxes recognized. Higher ratio is better for firm.

$$\text{Net Profit Ratio} = \frac{\text{Net Profit or Profit after Tax}}{\text{Net Revenue}}$$

4. **Return on Capital Employed:** Return on capital employed is an accounting ratio used in finance, valuation, and accounting. It is a useful measure for comparing the relative profitability of companies after taking into account the amount of capital used. It is calculated as:

$$\text{Return on Capital Employed} = \frac{\text{Profit before Int. \& Tax}}{\text{Capital Employed}} \times 100$$

Capital Employed = Share Capital including reserves + Long term funds

Or

Capital Employed = Current Assets + Fixed Assets – Current liabilities

5. **Earning per Shares:** Earning per share (EPS) is calculated as a company's profit divided by the outstanding shares of its common stock. ... It is common for a company to report EPS that is adjusted for extraordinary items and potential share dilution. The higher a company's EPS, the more profitable it is considered.

$$\text{Earning Per Share} = \frac{\text{Profit after Interest, Tax and Depreciation}}{\text{Number of Equity Shares}}$$

6. **Dividend Pay-out Ratio:** The dividend pay-out ratio is the ratio of the total amount of dividends paid out to shareholders relative to the net income of the company. It is the percentage of earnings paid to shareholders in dividends. A high Dividend Payout Ratio implies a better position and goodwill of the business for the shareholders.

$$\text{Dividend Pay-out Ratio} = \frac{\text{Dividend per Share}}{\text{Earnings per Share}}$$

$$\text{Dividend per share} = \frac{\text{Dividend paid}}{\text{No. of shares}}$$

7. **Price Earning Ratio:** Price-to-earnings ratio indicates the amount an investor can expect to invest in a company in order to receive return of that company's earnings. This is why the P/E is sometimes referred to as the price multiple because it shows how much investors are willing to pay to earn in return. It shows the relationship between the market price of a share and the earnings per share. Higher Price Earning Ratio is a good sign for a company.

$$\text{Price Earning Ratio} = \frac{\text{Market Price of a Share}}{\text{Earning per Share}}$$

Question 4:

The current ratio provides a better measure of overall liquidity only when a firm's inventory cannot easily be converted into cash. If inventory is liquid, the quick ratio is a preferred measure of overall liquidity. Explain.

Answer 4:

Current Ratio: It explains the relationship between current assets and current liabilities. It is calculated as:

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

Currents Assets are readily converted into cash within a short period of time like, cash in hand, cash at bank, marketable securities, debtors, stock, bills receivables, prepaid expenses. etc.

Current Liabilities are those which are to be repaid in a short period of time, usually within a year like, bank overdraft, bills payables, Short-term creditors, provision for tax, outstanding expenses etc.

Liquid Ratio-Liquid or quick ratio, also known as the acid-test ratio is a type of liquidity ratio, which measures the ability of a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. It indicates whether a firm has sufficient funds to pay its current liabilities immediately. It is calculated as:

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

Current Ratio is suitable for a business where the inventories cannot be readily converted into cash. Whereas, the businesses where the stock can be readily realised, Liquid Ratio is a more suitable measure to reveal their liquidity position. If inventory build up is a major chunk of current asset then Current Ratio is more preferable and the liquidity ratio for such a company would not give a clear picture of the liquidity.

If the prices of stock held is uncertain in future companies prefer Liquid Ratio because it may affect the liquidity position and also affect the Current Ratio.

Numerical Questions

Question 1:

Following is the Balance Sheet of Raj Oil Mills Limited as at March 31, 2017.Calculate current ratio.

Particulars	**Amount (₹)**
Equity and Liabilities	
1. Shareholders' Funds	
a. Share Capital	7,90,000
b. Reserves and Surplus	35,000
2. Current Liabilities	
a. Trade Payable	72,000
Total	**8,97,000**
Assets	
1. Non-Current Assets	
a. Fixed Assets	7,53,000
i. Tangible Assets	30,000
2. Current Assets	
a. Inventories	55,800

b. Trade Receivables	28,800
c. Cash and Cash Equivalent	59,400
Total	**8,97,000**

Answer 1:

Calculate Ratios

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{1,44,000}{72,000}$$

Current Assets = Inventories + Trade Receivables + Cash

= 55,800 + 28,800 + 59,400 = ₹1,44,000

Current Liabilities = Trade Payables = ₹72,000

Question 2:

Following is the Balance Sheet of Title Machine Ltd. as at March 31, 2017.

Particulars	**Amount (₹)**
Equity and Liabilities	
1. Shareholders' Funds	
a. Share Capital	24,00,000
b. Reserves and Surplus	6,00,000
2. Non-Current Liabilities	
a. Long Term Borrowing	9,00,000
3. Current Liabilities	
a. Short Term Borrowing	6,00,000
b. Trade Payable	23,40,000
c. Short Term Provision	60,000
Total	**69,00,000**
Assets	
1. Non-Current Assets	
a. Fixed Assets	
i. Tangible Assets	45,00,000
2. Current Assets	
a. Inventories	12,00,000
b. Trade Receivables	9,00,000
c. Cash and Cash Equivalent	2,28,000
d. Short Term Loans and Advances	72,000
Total	**69,00,000**

Calculate Current Ratio and Liquidity Ratio

Answer 2:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{24,00,000}{30,00,000} = 0.8:1$$

Current Assets = Inventories + Trade Receivables + Cash + Short term Loan and Advances

= 12,00,000 + 9,00,000 + 2,28,000 + 72,000 = Rs 24,00,000

Current Liabilities = Trade Payables + Short-Term Borrowing + Short Term Provision

= 23,40,000 + 6,00,000 + 60,000 = Rs 30,00,000

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{12,00,000}{30,00,000} = 0.4:1$$

Quick Assets = Trade Receivable + Cash + Short term Loan and Advances

= 9,00,000 + 2,28,000 + 72,000 = 12,00,000

Question 3:

Current Ratio is 3.5: 1. Working Capital is ₹90,000. Calculate the amount of Current Assets and Current Liabilities.

Answer 3:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$ i.e. Current Asset = 3.5 Current Liabilities (1)

Working Capital = Current Asset – Current Liability

This implies,

90,000 = 3.5 Current liabilities – Current liabilities (from 1)

Current liabilities = $\frac{90,000}{}$ = 36,000

Therefore, Current Asset = 3.5 × 36,000 = 1,26,000

Question 4:

Shine Limited has a current ratio 4.5: 1 and quick ratio 3: 1; if the inventory is 36,000, calculate Current Liabilities and Current Assets.

Answer 4:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{4.5}{1}$$

This implies, Current Asset = 4.5 Current Liabilities

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{3}{1}$$

This implies, Quick Asset = 3 Current Liabilities

Quick Assets = Current Assets – Inventory

Therefore 4.5 Current Liabilities – 3 Current Liabilities = 36,000

Current liabilities = 24,000

Current Assets = 4.5 Current Liabilities

Therefore, Current Assets = 4.5 × 24,000 = 1,08,000

Question 5:

Current Liabilities of a company are ₹75,000. If current ratio is 4:1 and Liquid Ratio is 1: 1, calculate value of Current Assets, Liquid Assets and Inventory.

Answer 5:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \text{ i.e. } 4 = \frac{\text{Current Assets}}{75{,}000}$$

This implies, Current Asset = 75,000 × 4 = 3,00,000

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} \text{ i.e } 1 = \frac{\text{Quick Asset}}{75{,}000}$$

This implies, Quick Asset = 75,000

Quick Assets = Current Assets – Inventory

Therefore Inventory = 3,00,000 –75,000 = 2,25,000

Question 6:

Handa Ltd. has inventory of ₹20,000. Total liquid assets are ₹1,00,000 and quick ratio is 2: 1. Calculate current ratio.

Answer 6:

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} \text{ i.e } 2 = \frac{1{,}00{,}000}{\text{Current Liabilities}}$$

This implies, Current Liabilities = 50,000

Current Assets = Quick Assets + Inventory

Therefore, Current Assets = 1,00,000 + 20,000 = 1,20,000

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{1{,}20{,}000}{50{,}000} = 2.4{:}1$$

Question 7:

Calculate debt-equity ratio from the following information:

Total Assets	₹15,00,000
Current Liabilities	₹6,00,000
Total Debts	₹12,00,000

Answer 7:

$$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

Equity = Total Assets – Debt

= 15,00,000 – 12,00,000 = 3,00,000

$$\text{Therefore, Debt Equity ratio} = \frac{6{,}00{,}000}{3{,}00{,}000} = 2{:}1$$

Question 8:

Calculate Current Ratio if: Inventory is ₹6,00,000; Liquid Assets ₹24,00,000; Quick Ratio 2: 1.

Answer 8:

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} \text{ i.e } 2 = \frac{24,00,000}{\text{Current Liabilities}}$$

This implies, Current Liabilities = 12,00,000

Current Assets = Quick Assets + Inventory

Therefore, Current Assets = 24,00,000 + 6,00,000 = 30,00,000

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{30,00,000}{12,00,000} = 2.5:1$$

Question 9:

Compute Inventory Turnover Ratio from the following information: Net Revenue from Operations ₹2,00,000 Gross Profit ₹50,000

Inventory at the end ₹60,000 Excess of inventory at the end over inventory in the beginning ₹20,000

Answer 9:

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

Cost of Goods Sold = Net Sales – Gross Profit = 2,00,000 – 50,000 = 1,50,000

Opening Inventory = Closing Inventory – 20,000

Therefore, Opening Inventory = 60,000 – 20,000 = 40,000

$$\text{Average Inventory} = \frac{40,000 + 60,000}{2}$$

$$\text{Inventory Turnover Ratio} = \frac{1,50,000}{50,000} = 3 \text{ times}$$

Question 10:

Calculate following ratios from the following information: (i) Current ratio (ii) Liquid ratio (iii) Operating Ratio (iv) Gross profit ratio

Current Assets	₹35,000
Current Liabilities	₹17,500
Inventory	₹15,000
Operating Expenses	₹20,000
Revenue from Operations	₹60,000
Cost of Revenue from operation	₹30,000

Answer 10:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{35,000}{17,000} = 2:1$$

$$\text{Acid Test Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{20,000}{17,500} = 1.14:1$$

$$\text{Operating Ratio} = \frac{\text{COGS + Operating Expenses}}{\text{Net Revenue from Operations}} \times 100$$

$$= \frac{50,000 + 20,000}{60,000} \times 100 = 83.33\%$$

Gross Profit = Revenue – COGS

= 60,000 – 30,000 = 30,000

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue}} \times 100 = \frac{30,000}{60,000} \times 100 = 50\%$$

Question 11:

From the following information calculate: (i) Gross Profit Ratio (ii) Inventory Turnover Ratio (iii) Current Ratio (iv) Liquid Ratio (v) Net Profit Ratio (vi) Working Capital Ratio:

Particulars	**Amount (₹)**
Revenue from Operations	25,20,000
Net Profit	3,60,000
Cost of Revenue from Operations	19,20,000
Long-term Debts	9,00,000
Trade Payables	2,00,000
Average Inventory	8,00,000
Current Assets	7,60,000
Fixed Assets	14,40,000
Current Liabilities	6,00,000
Net Profit before Interest and Tax	8,00,000

Answer 11:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Revenue}} \times 100 = \frac{6,00,000}{25,20,000} \times 100 = 23.80\%$$

(W. N. 1) Gross Profit = Net Revenue – Cost of Goods Sold

= 25,20,000 – 19,20,000 = 6,00,000

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

$$= \frac{19,20,000}{8,00,000} = 2.4 \text{ times}$$

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{15,60,000}{6,00,000} = 2.5:1$$

$$\text{Acid Test Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{7,60,000}{6,00,000} = 1.25:1$$

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Revenue}} = \frac{3,60,000}{25,20,000} = 14.30\%$$

$$\text{Working Capital Ratio} = \frac{\text{Net Revenue}}{\text{Working Capital}} = \frac{25,20,000}{9,60,000} = 2.625 \text{ times}$$

(W.N 2) Working Capital = Current Assets – Current Liabilities

= 15,60,000 – 6,00,000

= 9,60,000

Question 12:

Compute Gross Profit Ratio, Working Capital Turnover Ratio, Debt Equity Ratio and Proprietary Ratio from the following information:

Particulars	**Amount (₹)**
Paid-up Share Capital	5,00,000
Current Assets	4,00,000
Revenue from Operations	10,00,000
13% Debentures	2,00,000
Current Liabilities	2,80,000
Cost of Revenue from Operations	6,00,000

Answer 12:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Revenue}} \times 100 = \frac{4,00,000}{10,00,000} \times 100 = 40\%$$

(W. N. 1) Gross Profit = Net Revenue – Cost of Goods Sold

= 10,00,000 – 6,00,000 = 4,00,000

$$\text{Working Capital Ratio} = \frac{\text{Net Revenue}}{\text{Working Capital}} = \frac{10,00,000}{1,20,000} = 8.30 \text{ times}$$

(W.N 2) Working Capital = Current Assets – Current Liabilities

= 4,00,000 – 2,80,000 = 1,20,000

$$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\text{Debt Equity ratio} = \frac{2,00,000}{5,00,000} = 2:5$$

$$\text{Proprietary Ratio} = \frac{\text{Equity shareholder funds}}{\text{Total Assets}}$$

$$= \frac{5,00,000}{9,80,000} = 0.5:1$$

(W.N 3) Total Asset = Paid up capital + Debentures + Current Liabilities

= 5,00,000 + 2,00,000 + 2,80,000 = 9,80,000

Question 13:

Calculate Inventory Turnover Ratio if: Inventory in the beginning is ₹76,250, Inventory at the end is 98,500, Gross Revenue from Operations is ₹5,20,000, Sales Return is ₹20,000, Purchases is ₹3,22,250.

Answer 13:

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

$$= \frac{3,00,000}{87,735} = 3.43 \text{ times}$$

(W.N. 1) Cost of Goods Sold = Opening Stock + Purchases – Closing Stock

= 76,250 + 3,22,250 – 98,500

= 3,00,000

$$\text{(W.N. 2) Average Stock} = \frac{\text{Opening stock + Closing Stock}}{2} = \frac{76,250 + 98,000}{2} = 87,735$$

Question 14:

Calculate Inventory Turnover Ratio from the data given below:

Particulars	**Amount (₹)**
Inventory in the beginning of the year	10,000
Inventory at the end of the year	5,000
Carriage	2,500
Revenue from Operations	50,000
Purchases	25,000

Answer 14:

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

$$= \frac{32,500}{7,500} = 4.30 \text{ times}$$

(W.N. 1) Cost of Goods Sold = Opening Stock + Purchases + Carriage – Closing Stock

= 10,000 + 25,000 + 2,500 –5,000

= 32,500

$$\text{(W.N. 2) Average Stock} = \frac{\text{Opening stock + Closing Stock}}{2} = \frac{10,000 + 5,000}{2} = 7,500$$

Question 15:

A trading firm's average inventory is ₹20,000 (cost). If the inventory turnover ratio is 8 times and the firm sell goods at a profit of 20% on sales, ascertain the profit of the firm.

Answer 15:

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

$$\text{This implies, } 8 = \frac{\text{Cost of Goods Sold}}{20{,}000}$$

Therefore, Cost of Goods Sold = 1,60,000 (1)

Profit = 20% which implies that COGS = 80%

$$\text{COGS} \times \frac{100}{80} = \text{Revenue from operations}$$

$$\text{Revenue from operations} = 1{,}60{,}000 \times \frac{100}{80} = 2{,}00{,}000 \text{ (2)}$$

Profit = 2,00,000 – 1,60,000 = 40,000 (From 1 & 2)

Question 16:

You are able to collect the following information about a company for two years:

Particulars	**Amount 2015-16**	**Amount 2016-17**
Trade receivables on Apr. 01	4,00,000	5,00,000
Trade receivables on Mar. 31		5,60,000
Stock in trade on Mar. 31	6,00,000	9,00,000
Revenue from operations (at gross profit of 25%)	3,00,000	24,00,000

Calculate Inventory Turnover Ratio and Trade Receivables Turnover Ratio

Answer 16:

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

$$= \frac{18{,}00{,}000}{7{,}500{,}000} = 2.4 \text{ times}$$

(W.N. 1) Cost of Goods Sold = Revenue – Gross Profit

= 24,00,000 – 6,00,000

= 18,00,000

$$\text{(W.N. 2) Average Stock} = \frac{\text{Opening stock + Closing Stock}}{2}$$

$$= \frac{6{,}00{,}000 + 9{,}00{,}000}{2} = 7{,}50{,}000$$

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average trade receivable}}$$

$$= \frac{24{,}00{,}000}{5{,}30{,}000} = 4.50 \text{ times}$$

(W. N. 3) Trade Receivable Turnover Ratio = $\frac{\text{Opening trade receivables + Closing trade receivables}}{2}$

$= \frac{5,00,000 + 5,60,000}{2} = 5,30,000$

Question 17:

From the following Balance Sheet and other information, calculate following ratios:

(i) Debt-Equity Ratio (ii) Working Capital Turnover Ratio (iii) Trade Receivables Turnover Ratio

Particulars	**Amount (₹)**
I. Equity and Liabilities:	
1. Shareholders' funds	
(a) Share capital	10,00,000
(b) Reserves and surplus	9,00,000
2. Non-current Liabilities	
Long-term borrowings	12,00,000
3. Current Liabilities	
Trade payables	5,00,000
Total	**36,00,000**
II. Assets	
1. Non-current Assets	
Fixed assets	
– Tangible assets	18,00,000
2. Current Assets	
(a) Inventories	4,00,000
(b) Trade Receivables	9,00,000
(c) Cash and cash equivalents	5,00,000
Total	**36,00,000**

Additional Information: Revenue from Operations ₹18,00,000

Answer 17:

Debt Equity Ratio = $\frac{\text{Debt}}{\text{Equity}}$

Debt Equity ratio = $\frac{12,00,000}{19,00,000} = 0.63:1$

(W. N. 1)

Equity = Share Capital + Reserve and Surplus

= 10,00,000 + 9,00,000 = ₹19,00,000

$$\text{Working Capital Ratio} = \frac{\text{Net Revenue}}{\text{Working Capital}} = \frac{18,00,000}{13,00,000} = 1.39 \text{ times}$$

(W.N 2) Working Capital = Current Assets – Current Liabilities

= 18,00,000 – 5,00,000 = 13,00,000

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average trade receivable}}$$

$$= \frac{18,00,000}{9,00,000} = 2 \text{ times}$$

Question 18:

From the following information, calculate the following ratios: (i) Liquid Ratio (ii) Inventory turnover ratio (iii) Return on investment

Particulars	**Amount (₹)**
Inventory in the beginning	50,000
Inventory at the end	60,000
Revenue from operations	4,00,000
Gross Profit	1,94,000
Cash and Cash Equivalents	40,000
Trade Receivables	1,00,000
Trade Payables	1,90,000
Other Current Liabilities	70,000
Share Capital	2,00,000
Reserves and Surplus	1,40,000

Answer 18:

$$\text{Quick Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{1,40,000}{2,60,000} = 0.55:1$$

(W.N.1)

Quick Asset = Cash + Debtors = 40,000 + 60,000 = 1,00,000

Current liabilities = Creditors + Expenses = 1,90,000 + 70,000 = 2,60,000

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

$$= \frac{2,06,000}{55,000} = 3.75 \text{ times}$$

(W.N. 2)

Cost of Goods Sold = Revenue – Gross Profit

= 4,00,000 – 1,94,000

= 2,06,000

$$\text{Average Stock} = \frac{\text{Opening stock + Closing Stock}}{2} = \frac{50{,}000 + 60{,}000}{2} = 55{,}000$$

$$\text{Return on Investment} = \frac{\text{Profit before Int \& Tax}}{\text{Capital Employed}} \times 100$$

$$= \frac{1{,}40{,}000}{3{,}40{,}000} \times 100 = 41.20\%$$

(W. N. 3)

Capital Employed =Share Capital + Profit and Loss = 2,00,000 + 1,40,000 = 3,40,000

Question 19:

From the following, calculate (a) Debt-Equity Ratio (b) Total Assets to Debt Ratio (c) Proprietary Ratio.

Particulars	**Amount (₹)**
Equity Share Capital	75,000
Preference Share Capital	25,000
General Reserve	45,000
Balance in the Statement of Profit & Loss	30,000
Debentures	75,000
Trade Payables	40,000
Outstanding Expenses	10,000

Answer 19:

$$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\text{Debt Equity ratio} = \frac{75{,}000}{1{,}75{,}000} = 0.43:1$$

(W. N. 1)

Equity = Equity Share Capital + Preference Share Capital + General Reserve + Profit

= 75,000 + 25,000 + 45,000 + 30,000

= ₹1,75,000

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Long –Term Debt}} = \frac{3{,}00{,}000}{75{,}000}$$

(W. N. 2)

Total Assets = Total Equity + Debentures + Creditors + Expenses

= 1,75,000 + 75,000 + 40,000 + 10,000 = 3,00,000

$$\text{Proprietary Ratio} = \frac{\text{Equity shareholder funds}}{\text{Total Assets}}$$

$$= \frac{1{,}75{,}000}{3{,}00{,}000} = 0.58:1$$

Question 20:

Cost of Revenue from Operations is ₹1,50,000. Operating expenses are Rs 60,000. Revenue from Operations is Rs 2,50,000. Calculate Operating Ratio.

Answer 20:

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Revenue from Operations}} \times 100$$

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

Question 21:

Calculate the following ratio on the basis of following information: (i) Gross Profit Ratio (ii) Current Ratio (iii) Acid Test Ratio (iv) Inventory Turnover Ratio (v) Fixed Assets Turnover Ratio

Particulars	**Amount (₹)**
Gross Profit	50,000
Revenue from Operations	1,00,000
Inventory	15,000
Trade Receivables	27,500
Cash and Cash Equivalents	17,500
Current Liabilities	40,000
Land & Building	50,000
Plant & Machinery	30,000
Furniture	20,000

Answer 21:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue}} \times 100 = \frac{50,000}{1,00,000} \times 100 = 50\%$$

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} = \frac{60,000}{40,000} = 1.5:1$$

(W. N. 1)

Current Assets = Trade Receivable + Inventory + Cash = 27,500 + 15,000 + 17,500 = 40,000

$$\text{Acid Test Ratio} = \frac{\text{Quick Asset}}{\text{Current Liabilities}} = \frac{45,000}{40,000} = 1.125:1$$

(W. N. 2)

Quick Assets = Trade Receivable + Cash = 27,500 + 17,500 = 45,000

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

$$= \frac{50,000}{15,000} = 3.33 \text{ times}$$

(W.N. 3)

Cost of Goods Sold = Revenue – Gross Profit

= 1,00,000 – 50,000 = 50,000

$$\text{Fixed Asset Turnover Ratio} = \frac{\text{Net Sales}}{\text{Fixed Assets}}$$

$$= \frac{50,000}{1,00,000} = 0.5 \text{ times}$$

Question 22:

From the following information calculate Gross Profit Ratio, Inventory Turnover Ratio and Trade Receivable Turnover Ratio.

Particulars	**Amount (₹)**
Revenue from Operations	3,00,000
Cost of Revenue from Operations	2,40,000
Inventory at the end	62,000
Gross Profit	60,000
Inventory in the beginning	58,000
Trade Receivables	32,000

Answer 22:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue}} \times 100 = \frac{60,000}{3,00,000} \times 100 = 20\%$$

(W. N. 1) Gross Profit = Net Revenue – Cost of Goods Sold

$$= 3,00,000 - 2,40,000 = 60,000$$

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

$$= \frac{2,40,000}{60,000} = 4 \text{ times}$$

(W.N. 2)

$$\text{Average Stock} = \frac{\text{Opening stock + Closing Stock}}{2} = \frac{58,000 + 62,000}{2} = 60,000$$

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net Revenue from Operations}}{\text{Average trade receivable}}$$

$$= \frac{3,00,000}{32,000} = 9.4 \text{ times}$$