Rankers' Commerce (Patna 9386035411,9934073666)

ACCOUNTING RATIOS

- **Meaning of Ratio:** It is an arithmetical expression of relationship between two interdependent or related items.

Other word it is relationship between two numeric digit therefore one numbers expressed in the term of another.

Or, it is established quantitative relationship between two numbers

- **Meaning of Accounting Ratio:**
  - i. It is a ratio which is calculated on the basis of accounting information.
  - ii. It can be expressed as an arithmetical relationship between two accounting variables.
  - iii. It is a relationship that exists between figures shown in a Balance Sheet, Statement of Profit and Loss or any other statements or reports prepared by the organization.
  - iv. It is measurement of overall performance of the business during the particulars period

Business performance: - There are three types of the business performance.

i. **Profitability performance of the business.**
ii. **Solvency performance of the business.**
iii. **Activity performance of the business.**

- **Meaning of Ratio Analysis:**
  - i. It is a study of relationship among various financial factors in a business.
  - ii. It is a technique of analyzing the financial statements with the help of accounting ratio.
  - iii. It is a process of determining and interpreting relationships between items of financial statements to provide a meaningful understanding of the financial performance and position of an enterprise.
- **Objectives of Ratio Analysis:**
  - i. It simplifies understanding of financial information presented in the financial statement.
  - ii. It helps in determining short-term and long-term solvency of the business.
  - iii. It helps in assessing the operating efficiency of the business.
  - iv. It analyses profitability of the business.
  - v. It helps in comparative analysis which can be either intra-firm or inter firm comparisons.
- **Advantages of Ratio Analysis:**
  - i. **Tool for analysis of Financial Statements:** It helps the users of financial statements to analyze the financial position of an enterprise. Such users can be bankers, investors, creditors, etc. who are concerned about the performance of an enterprise.
  - ii. **Simplifies Accounting Data:** It simplifies understanding of accounting information presented in the financial statement. Calculation of ratios summaries briefly the results of detailed and complicated information.
  - iii. **Assessment of Operating Efficiency of Business:** Operating efficiency can be determined by assessing and evaluating liquidity, solvency and profitability of an enterprise. Calculation of ratios helps in determining and evaluating such aspects.

1. (Boring Road and kankarbagh Patna "By □□□□□ □□")

iv. **Assists in Forecasting:** Calculation, analysis and comparison of ratios helps in business planning and forecasting. This is because the trend of ratios being calculated acts as a guide for future planning.

v. **Identifies Weak Areas:** Calculation and analysis of various ratios help to identify and interpret the favorable and unfavorable ratios which can are used to identify the weak areas or unfavorable factors in the enterprise. Enterprise can then work upon such areas or factors to improve the performance.

vi. **Facilitates Inter-firm and Intra-firm Comparison:** When a firm compares its performance with that of other firms or with its industry standards in general, it is known as Inter-firm Comparison or Cross Sectional Analysis. On the other hand, if the performance of different units is belonging to the same firm is to be compared, it is known as Intra-firm Comparison. Accounting ratios are widely used for such comparisons.

- **Types of Ratios:** Ratios are classified based on following aspects:
  i. **Liquidity (short-term solvency):** These are the ratios which show the ability of the enterprise to meet its short-term financial obligations. It includes:
     a. Current Ratio
     b. Quick Ratio
  ii. **Solvency (long-term solvency):** These are the ratios which assess the long-term financial position of the enterprise. They assess the ability to meet the long-term financial obligations of the enterprise. It includes:
     a. Debt to Equity Ratio
     b. Total Assets to Debt Ratio
     c. Proprietary Ratio
     d. Interest Coverage Ratio
  iii. **Activity/Turnover:** These are the ratios which show how efficiently the enterprise resources are being used for the business operations. It includes:
     a. Inventory Turnover Ratio
     b. Trade Receivables Turnover Ratio
     c. Trade Payables Turnover Ratio
     d. Working Capital Turnover Ratio
  iv. **Profitability:** These ratios show the profitability of the enterprise. It includes:
     a. Gross Profit Ratio
     b. Operating Ratio
     c. Operating Profit Ratio
     d. Net Profit Ratio
     e. Return on Investment

Nature of Accounting Ratio:-

On the basis of performance of the business, – There are 3 types of the accounting ratio.

i. **Profitability Ratio**
ii. **Solvency Ratio**
iii. **Activity Ratio / Turnover Ratio**

Expression of the Accounting Ratio: - Accounting ratio can be expressed in the following manner.

i. **Simple Ratio/ Pure Ratio: -** The relationship between two figures can be presented into the form of a quotient. to be called simple ratio.
Example- 1:1, 2:5, 3:4 etc……

i. **Percentage Ratio: -** The relationship between two figures is presented in the form of percentage is called percentage ratio.
Example- 10%, 20%, 50% etc…..

ii. **Times Ratio/ Rate Ratio: -** The relationship between two figures can be presented in the form of times to be called times ratio.
Example- 4 times, 2 times, 7 times etc…..

Trading & Profit loss A/C:-

PARTICULARS	AMOUNT	PARTICULARS	AMOUNT
To opening stock	xxx	By sales	
To purchase xxx		xxx	xxx
Less: Return xxx	xxx	Less: Return	xxx
To Direct expense wages, carriage etc.	xxx	xxx By closing stock	
To gross profit	xxx		xxx
To indirect expense.	xxx		xxx
To net profit	xxx		xxx
		By gross profit	
		By indirect income	
	xxx		xxx

3. (Boring Road and kankarbagh Patna "By □□□□□ □□")

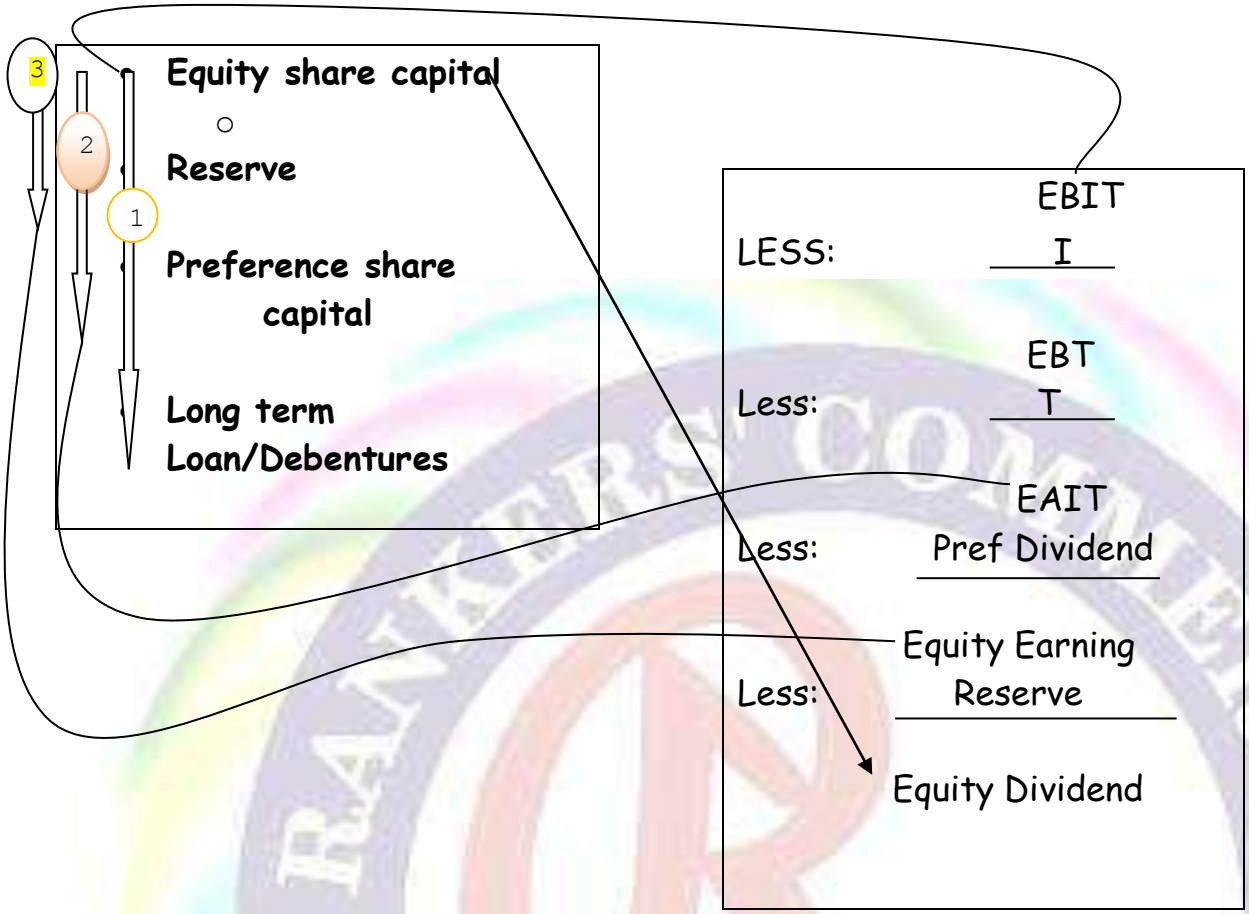
BALANCE SHEET:

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Equity share capital	xxx	Fixed Assets	xxx
Reserve & Surplus	xxx	Investment	xxx
Preference share capital	xxx	Current Assets	xxx
Loan (liabilities)	xxx	Miss. Assets	xxx
Secured xxx	xxx		
Unsecured xxx			
Current liabilities	xxx		
	xxx		xxx

General Formula:-

- Total purchase = Cash purchase + credit purchase
- Net purchase = Total purchase – Purchase return
- Total sales = cash sales +credit sales
- Net sales = Total sales – (sales return + sales tax)
- Cost of goods sold = opening stock + purchase + direct expense – closing stock.
- Sales = cost of goods sold + gross profit
- Cost of goods sold = sales – gross profit
- Gross profit = sales – cost of goods sold
- Indirect expense = operating expense + non operating expense
- Indirect income = operating income + non operating income
- Operating profit = GP + operating income – operating expense
- Operating profit = Net profit + none operating expense – non operating income.

4. (Boring Road and kankarbagh Patna "By □□□□□ □□")

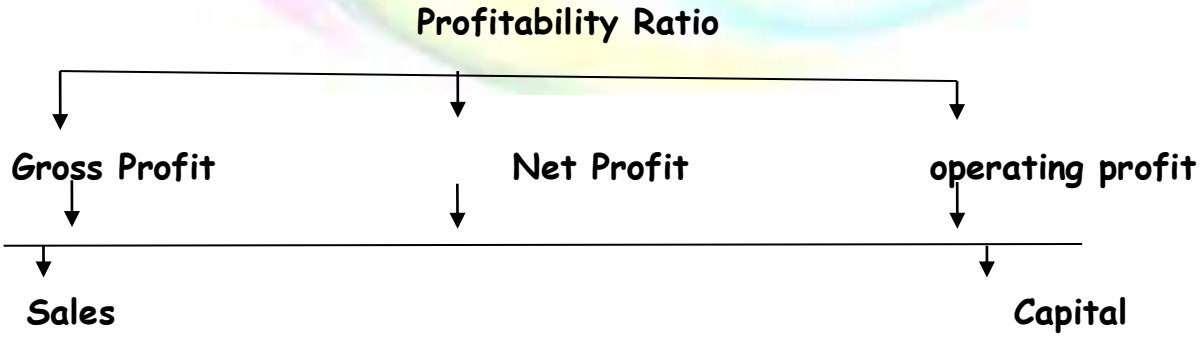


- **Capital employed = Esc + R + Psc + long term loan**

  Or

  Capital employed = Total Asset – Current liabilities
- **Share holder's fund = Esc + R + Psc**
- **Equity fund = Esc + R**

Profitability Ratio: - This ratio is determined as profit performance of the business concern during the particular period. Therefore the ratio established relationship between profit of the business and sales and capital of the business concern. Profitability ratio refers to the ability of the business to earn profit therefore it show the profit efficiency of the business. In this case this ratio measures the profit earnings capacity of the business. Generally profitability ratio is calculated into percentage.



5. (Boring Road and kankarbagh Patna "By □□□□□ □□")

- **Category of Profitability Ratio:-**
  - i. **Gross Profit Ratio**
  - ii. **Net profit Ratio**
  - iii. **Operating profit Ratio**
  - iv. **Operating expense Ratio / operating ratio**
  - v. **Capital employed Ratio / Return on investment**
  - vi. **Earnings per share Ratio**
  - vii. **Dividend per share Ratio**

Meaning and Computation of Gross Profit Ratio:

- **Understanding Gross Profit Ratio:**
  a. It is a relationship between the Gross Profit and Revenue from Operations (i.e., Net Sales).
  b. A change either in Revenue from Operations (i.e., Net Sales) or Cost of Revenue from Operations (i.e., Cost of goods sold) or both will have an impact on this ratio.
  c. It shows the average margin on goods sold.
  d. It determines the efficiency with which production and/or purchase operations and selling operations are carried on.
  e. It is a reliable guide for fixing selling prices.
  f. It is useful in determining the efficiency of trading activities.
  g. It can be compared with ratio of earlier years or with that of other firms to compare the efficiency and growth of business

Formula: $$\textbf{Gross profit ratio} = \frac{GP}{\text{Net sales}} \times 100$$

It is expressed in percentage

- **Understanding Gross Profit and Cost of Revenue from Operations for computing Gross Profit Ratio:**
  a. **Gross Profit:** It is calculated as follows:
  Gross Profit = Revenue from Operations (i.e. Net Sales)
  – Cost of Revenue from Operations (COGS)
  b. **Cost of Revenue from Operations:** It is calculated using the following:
  Cost of Revenue from Operations = Opening Inventory (excl. Spare parts & loose tools)
  + Net Purchases
  + Direct Expenses
  – Closing Inventory (excl. Spare parts & loose tools)

Or

Cost of Revenue from Operations = Cost of Materials Consumed
+ Purchases of Stock-in-Trade
+ Change in Inventories of FG, WIP & SIT

+ Direct Expenses

Or

Cost of Revenue from Operations = Revenue from Operations − Gross Profit

- **Reasons for increase or decrease in Gross Profit Ratio:**
  - **i. Increase:** This ratio increases because of the following reasons:
    a. If the selling price increases and the cost of revenue from operations is constant.
    b. If the Cost of revenue from operations decreases and the selling price is constant.
    c. If there exists a combination of above two situations.
  - **ii. Decrease:** This ratio decreases if the above reasons are reversed.

Meaning and Computation of Net Profit Ratio:

- **Understanding Net Profit Ratio:**
  i. It is a relationship between Net Profit and Revenue from Operations i.e., Net Sales.
  ii. It helps in determining the operational efficiency of the business.
  iii. It indicates the actual status of business, as higher the Net Profit Ratio, better the business.
  iv. An increase in the ratio over the past period shows improvement in the operational efficiency.
  v. A decline in the ratio over the past period shows a fall in the operational efficiency.
  vi. It facilitates comparison of operation efficiency with that of industry standards.
  vii. Formula:

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

Meaning and Computation of Operating Profit Ratio:

- **Understanding Operating Profit Ratio:**
  a. It is the relationship between Operating Profit and Revenue from Operations i.e., Net Sales.
  b. It determines the operational efficiency of the business.
  c. An increase in the ratio shows improvement in the operational efficiency of the entity.
  d. Formula:

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

It is expressed in Percentage

- **Understanding Operating Profit for computing Operating Profit Ratio:** It is computed using the following formula:

Operating Profit = Gross Profit + Other Operating Income +Other Operating Expenses

Or

Operating Profit = Net Profit Before Tax+ (Non-operating Expense/Losses) –(Non-Operating Incomes)

Or

Operating Profit = Revenue from Operations – Operating Cost

Relationship between Operating Profit and Operating Ratio

Operating Ratio + Operating Profit Ratio = 100

Meaning and Computation of Operating Ratio:

- **Understanding Operating Ratio:**
  a. It is a relationship between Operating Costs and Revenue from Operations.
  b. It is the proportion of Cost of Revenue from Operations and Operating Expenses to Revenue from Operations.
  c. It helps in assessing the operational efficiency of an entity.
  d. It shows the percentage of Revenue from Operations that is absorbed by the Cost of Revenue from Operations and Operating Expenses.
  e. A low operating ratio is better because it leaves higher profit margin to meet non-operating expenses, pay dividend, etc. On the other hand, a high operating ratio indicates decline in efficiency.
  f. Formula:

$$\textbf{Operating Ratio} = \frac{\textbf{Operating Cost}}{\textbf{Revenue from Operations}} \times 100$$

It is expressed in percentage

a. **Operating Expenses:** It is calculated using the following: Operating Expenses = Employee Benefit Expenses
+ Depreciation & Amortization Expenses
+ Other Expenses (Other than Non-Operating Expenses)

Or

Operating Expenses = Office Expenses + Administrative Expenses
+ Selling & Distribution Expenses
+ Employee Benefit Expenses
+ Depreciation & Amortization Expenses

Operating Cost: It is calculated using the following:

Operating Cost = Cost of goods sold+

Office Expenses + Administrative Expenses
+ Selling & Distribution Expenses
+ Employee Benefit Expenses
+ Depreciation & Amortization Expenses

b. **Operating expense ratio = 100 – operating profit ratio**

Meaning and Computation of Capital employed ratio/ return on investment ratio

Capital employed ratio/ return on investment ratio: - This ratio established relationship between net profit before interest and tax and capital employed of the business concern.

$$\text{Capital employed ratio} = \frac{\text{EBIT}}{\text{Capital employed}} \times 100$$

Meaning and Computation of Earnings per share:

Earnings per share: - This ratio established relationship between net profit after interest tax and preference dividend and number of equity share.

$$\text{Earnings per share} = \frac{\text{Net profit after interest, tax preference dividend}}{\text{No. of equity share}}$$

Meaning and Computation of Dividend Per share:

Dividend Per share: - This ratio established relationship between net profit after interest, tax, preference dividend and reserve and number of equity share.

$$\text{Dividend per share} = \frac{\text{Dividend paid to equity share holder}}{\text{No. of equity share}}$$

Meaning and Computation of Price earnings ratio:

Price earnings ratio: - This ratio established relationship between current market price per share and earnings per share.

$$\text{Price earnings ratio} = \frac{\text{market price per share}}{\text{Earnings per share}}$$

Solvency Ratio: - This ratio is measurement of solvency performance of the business during the particular period of the business other word the solvency ratio are calculated to judge the long term financial solvency of the business. Therefore the company is suppose to be financially sound and capable of payment its long term liability out of its assets. Other word solvency ratio is established relationship between assets and liabilities of the business.

Types of solvency ratio: - There are two types of solvency ratio.

a. **Long term solvency ratio.**

b. **Short term solvency ratio.**

Short term solvency ratio: - This ratio established relationship between short- term assets and short- term liability during the particular period therefore short term solvency ratio determines the company is supposed to be financially sound and capable of meeting its liability out of its assets. The solvency ratio is divided into two categories:

Meaning and Computation of Current Ratio:

- **Understanding Current Ratio:**
  a. It is a ratio which calculates the relationship between the current assets and current liabilities.
  b. It is a liquidity ratio that measures the ability of the enterprise to pay its short-term financial obligations i.e., current liabilities.
  c. It helps to identify whether the enterprise will be able to meet its short-term financial obligations when they become due for payment.
  d. It is expressed as a pure ratio.
  e. Formula: Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$
  f. Ideal Ratio: 2: 1. High Current Ratio means better liquidity but too high current ratio means Poor operational efficiency.

Meaning and Computation of Quick or Acid Test Ratio:

- **Understanding Liquid or Quick or Acid Test Ratio:**
  a. It is a liquidity ratio which measures the ability of the enterprise to meet its short-term financial obligations, i.e., Current Liabilities.
  b. It is a relationship of liquid assets with current liabilities.
  c. It is an indicator of short-term debt paying capacity of an enterprise and is therefore, a better indicator of liquidity.
  d. A high Liquid Ratio compared to Current Ratio may indicate under stocking while a low Liquid Ratio indicates overstocking.
  e. It is expressed as a pure ratio.
  f. Formula:

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

  g. **Standard Ratio:1:1.**

Where liquid assets = total current assets - (stock + prepaid expense)

Long term solvency ratio: - This ratio established relationship between long term liabilities and long term assets of the business concern. Such ratio determines the company is supposed to be financially sound and capable of meeting its long term liability out of its assets.

Meaning and Computation of Debt-to-Equity Ratio:

- **Understanding Debt-to Equity Ratio:**
  a. It is a relationship between long-term external equities, i.e., external debts (includes long-term borrowings and long-term provisions) and internal equities (Shareholders' Funds) of the enterprise.
  b. It measures the proportion of external funds and shareholder's invested in the company.
  c. It assesses long-term financial soundness of the enterprise and indicates the extent to which the enterprise depends on borrowed funds for its business.
  d. It is expressed as a Pure Ratio.
  e. Formula:

$$\text{Debt to Equity Ratio} = \frac{\text{Debt}}{\text{Equity (Shareholder's Funds)}}$$

OR

$$\text{Debt equity ratio} = \frac{\text{external liability}}{\text{Internal liability}}$$

Debt = Long-term Borrowings + Long-term Provisions

Or

= Total Debt – Current Liabilities

Or

= Capital Employed – Equity*

Equity = Share Capital + Reserves & Surplus

= Non-Current Assets

+ Working Capital

– Non Current Liabilities (Long-term Borrowing. + Long-term Prov.) Or

= Total Assets – Total Debt

Meaning and Computation of Total Assets to Debt Ratio:

- **Understanding Total Assets to Debt Ratio:**
  a. It is a relationship between total assets and long-term debts of the enterprise.
  b. It measures the extent to which debt (Long-term) is covered by the assets.
  c. It measures the 'Safety Margin' available to the lenders of the long-term debts.
  d. A higher ratio means higher safety for lenders and a lower ratio means lower safety for lenders.
  e. It is expressed as a Pure Ratio.
  f. Formula:

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Debt (Long-term}}$$

11. (Boring Road and kankarbagh Patna "By □□□□□ □□")

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Meaning and Computation of Proprietary Ratio:

- **Understanding Proprietary Ratio:**
  a. It is a relationship between proprietor's fund and total assets.
  b. It shows the financial strength of the entity.
  c. It is used to measure the proportion of totals assets financed by Proprietors' Funds.
  d. It is an important ratio for the creditors as it helps them identify the portion of shareholders' funds in the total assets employed in the firm and also the safety margin available to them.
  e. A very high ratio indicates improper mix of proprietors' funds and loan funds that results in lower return on investment. A higher ratio means adequate safety for creditors and lenders. On the other hand, lower ratio means inadequate safety for creditors and lenders.
  f. It can be expressed either as 'Pure Ratio' or a 'Percentage Ratio'.
  g. Formula:

$$\text{Proprietary ratio} = \frac{\text{shareholder's fund}}{\text{Total assets}}$$

Meaning and Computation of Interest Coverage Ratio:

- **Understanding Interest Coverage Ratio:**
  a. It is a relationship between Net Profit before Interest and Tax and Interest on Long Term Debts.
  b. It is calculated to ascertain the amount of profit available to cover interest on long term debts.
  c. For lenders a higher Interest Coverage Ratio is considered better as it signifies a higher margin to meet interest cost.
  d. Formula:

$$\text{Interest Coverage Ratio} = \frac{\text{Profit before Interest and Tax}}{\text{Interest on Long-Term Debt}}$$

12. (Boring Road and kankarbagh Patna "By □□□□□ □□")

e. It is expressed in number of times

Activity Ratios/ Turnover Ratio

Meaning and Computation of Inventory Turnover Ratio:

- **Understanding Inventory Turnover Ratio:**
  a. It is a relationship between Cost of Revenue from Operations, i.e., Cost of Goods Sold and average inventory carried during that period.
  b. It ascertains whether the investment in stock is appropriate and that only the required amount is invested in stock.
  c. It measures the number of times an enterprise sells and replaces its inventory and therefore, it is an activity as well as efficiency ratio that measures efficiency of inventory management.
  d. A high ratio shows that more sales are being produced by a rupee of investment in the inventories. On the other hand, a low ratio means inefficient use of investment in inventory, over investment in stocks, etc. A very high ratio indicates overtrading which may result in working capital shortage. Only an optimum Inventory Turnover Ratio ensures adequate working capital and helps firm ear a reasonable margin.
  e. Formula:

Inventory Turnover Ratio = Cost of Goods Sold

Average Stock

Average Inventory: It is calculated as follows:
Average Inventory = (Opening Inventory + Closing Inventory) ÷ 2

Meaning and Computation of Fixed Assets Turnover Ratio:

It is relationship between fixed assets and costs of goods sold/ turn over.

Fixed assets turnover ratio = cost of goods sold

FIXED ASSETS

Meaning and Computation of Current Assets Turnover Ratio:

It is relationship between current assets and costs of goods sold/ turn over.

Current assets turnover ratio = cost of goods sold

CURRENT ASSETS

Meaning and Computation of Working Capital Turnover Ratio:

It is relationship between working capital and costs of goods sold/ turn over.

13. (Boring Road and kankarbagh Patna "By □□□□□ □□")

Working capital turnover ratio = cost of goods sold

WORKING CAPITAL

Where working capital = current assets – current liability

Meaning and Computation of Trade Receivables Turnover Ratio:

- **Understanding Trade Receivables Turnover ratio:**
  a. It is the relationship between Credit Revenue from Operations (i.e., Net Credit Sales) and Average Trade Receivables (i.e., Average of debtors and bills receivable of the year).
  b. It indicates the number of times trade receivables are turned over in a year in relation to credit sales.
  c. It identifies how quickly trade receivables are converted into Cash and Cash Equivalents and therefore, indicates the efficiency in collection of amounts due against trade receivables.
  d. A higher ratio shows that debts are collected more promptly and a lower ratio shows inefficiency in collection or increased credit period or more investment in debtors.
  e. It should be computed keeping in mind that provision for doubtful debts is not deducted from trade receivables since the purpose is to calculate the number of days for which sales are tied up in trade receivables and not to ascertain realizable value of debtors.
  f. Formula:

Trade Receivable Turnover Ratio= Credit Revenue from Operations (Net Credit Sales) / Average Trade Receivables

It is expressed in Times

Note 1: Credit Revenue from Operations (i.e., Net Credit Sales) = Credit Sales – Sales Return
Or Revenue from Operations – Cash Revenue from Operations

Note 2: Average Trade Receivable = Opening (Debtor + B/R) + Closing (Debtor + B/R) / 2

- **Understanding Average Collection Period or Debt Collection Period:**
  a. It is a ratio which provides an approximation of the average time that it takes to collect debtors.
  b. It is computed by dividing 365 (days) or 12 (months) by the Trade Receivables Turnover Ratio.
  Formula:

Debt Collection Period = Average Trade Receivable / (Net Credit Sales) × 365/12/52

It is expressed in number of days or months

Meaning and Computation of Trade Payables Turnover ratio:

- **Understanding Trade Payables Turnover Ratio:**
  a. It is a relationship between the net credit purchases and total payables or average payables.
  b. It identifies the number of times the creditors are turned over in relation to credit purchases.
  c. A high ratio indicates that the enterprise is not availing a full credit period, which boosts up the credit worthiness of the enterprise. On the other hand, a low ratio or longer payment period indicates that creditors are not paid in time or increased credit period.
  d. Formula:
  e. It is expressed in Times

Trade Payables Turnover Ratio = Net Credit Purchases / Average Trade Payables

Or Average Trade Payables = (Opening Creditors + Closing Creditors + Opening B/P + Closing B/P) ÷ 2

- **Understanding Average Payment Period or Average Age of Payables:**
  a. It shows the credit period enjoyed by the enterprise in paying creditors.
  b. Formula:

Average Payment Period = Average Trade Payables / Net Credit Purchases ×365/12/52

15. (Boring Road and kankarbagh Patna "By □□□□□ □□")