3. Activity Ratios:

- This ratio measures the efficiency with which a firm manages its resources or assets.
- It is also called as turnover ratio.
- This ratio indicate the speed with which assets are converted over its sales.
- It includes the following ratios:

a. Capital Turnover Ratio:

- This ratio establish a relationship between net sales and capital employed.
- The objective of computing this ratio is to determine the efficiency with which capital employed is utilised.

- It can be determined by using the following formula:

Capital Turnover Ratio= Net Sales/Capital Employed

- **Where;**
- **Net Sales=** Gross Sales - Sales Return
- **Gross Sales**= Cash Sales + Credit Sales
- **Capital Employed=** Equity Share Capital + Preference Share Capital + Reserves + Net Profit + Debentures + Bonds + Loans – Net Loss – Preliminary expenses – Underwriting expenses

Question: Calculate Capital turnover ratio. Cash Sales ₹ 17,00,000, Credit Sales ₹ 5,00,000 and Sales Return ₹ 2,00,000.

Liabilities	**Amount (₹)**	**Assets**	**Amount (₹)**
Equity Share Capital	1,00,000	Land and Building	6,00,000
18% Preference Share		Plant and Machinery	5,00,000
Capital	1,00,000	Furniture and Fixtures	1,00,000
Reserves	60,000		12,00,000
Profit and Loss A/C	2,40,000	Less: Depreciation	2,00,000
15% Debentures	8,00,000		10,00,000
Trade Creditors	40,000	Long term investments	1,00,000
Bills Payable	30,000	Stock	95,000
Outstanding expenses	20,000	Debtors	3,10,000
Bank overdraft	10,000	Marketable Securities	10,000
Provision for Tax	2,40,000	Cash	10,000
		Bills Receivable	10,000
		Prepaid expenses	5,000
		Preliminary expenses	60,000
		Underwriting Commission	40,000

b. <u>Fixed Assets Turnover Ratio:</u>

- This ratio establish a relationship between net sales and fixed assets.
- The objective of computing this ratio is to determine the efficiency with which fixed assets are utilised.
- It can be determined by using the following formula:

- **Fixed Assets Turnover Ratio= Net Sales/Net Fixed Assets**
- **Where;**
- **Net Sales=** Gross Sales-Sales Return
- **Net Fixed Assets=** Gross Fixed Assets-Depreciation
- **<u>Question:</u>** If Fixed Assets is ₹ 7,00,000, Depreciation ₹ 1,00,000, Cash Sales ₹ 1,50,000, Credit Sales ₹ 17,00,000, Sales Return ₹ 50,000. Calculate Fixed Assets Turnover Ratio.

c. Stock Turnover Ratio:

- This ratio establish a relationship between cost of goods sold and average inventory.
- The objective of computing this ratio is to determine the efficiency with which the inventory is utilised.
- It can be determined by using the following formula:

Stock Turnover Ratio= Cost of Goods Sold/Average Inventory

OR

Stock Turnover Ratio= Net Sales/Average Inventory

- **Where;**
- **Cost of Goods Sold=** Opening Stock + Net Purchases + Direct expenses – Closing Stock

OR

- **Cost of Goods Sold=** Sales-Gross Profit
- **Average Inventory=** $\frac{\text{Opening Inventory + Closing Inventory}}{2}$
- **Net Sales=** Gross Sales-Sales Return

Question:

- If Opening Stock ₹ 20,000, Closing Stock ₹ 10,000, Purchases ₹ 50,000, Wages ₹ 3,000, Carriage inward ₹ 2,000, Freight outward ₹ 5,000. Calculate Stock Turnover Ratio.

d. Debtors Turnover Ratio:

- This ratio establish a relationship between net credit sales and average trade debtors.
- The objective of computing this ratio is to determine the efficiency with which the debtors are managed.
- It is also called as Receivables Turnover ratio.
- It can be calculated by using the following formula:

Debtors Turnover Ratio= Net Credit Sales/ Average Trade Debtors

- **Where;**
- **Net Credit Sales=** Gross Credit Sales – Sales Return
- **Trade Debtors=** Sundry Debtors + Bills/Accounts Receivable
- **Average Trade Debtors=**

$$\frac{\text{Opening Trade Debtors} + \text{Closing Trade Debtors}}{2}$$

Question:

1. Calculate the Debtors Turnover ratio for the year 2019.

Particulars	2018	2019
Sundry Debtors	15,000	45,000
Bills Receivable	5,000	15,000
Provision for Doubtful Debts	1,500	4,500

Total Sales ₹ 2,10,000, Sales Return ₹ 10,000, Cash Sales ₹ 40,000.

e. Creditors Turnover Ratio:

- This ratio establish a relationship between net credit purchases and average trade creditors.
- The objective of computing this ratio is to determine the efficiency with which the creditors are managed.
- It can be determined by using the following formula:

Creditors Turnover Ratio= Net Credit Purchases/Average Trade Creditors

- **Where;**
- **Net credit purchases=** Gross credit purchases – Purchase returns
- **Trade Creditors=** Sundry Creditors + Bills Payable or Accounts Payable
- **Average Trade Creditors=**

$$\frac{\text{Opening Trade Creditor + Closing Trade Creditor}}{2}$$

<u>Question</u>: Calculate Creditors turnover ratio

Particulars	**Amount (₹)**
Cash Purchases	1,00,000
Opening Sundry Creditors	25,000
Closing Bills Payable	25,000
Purchase Return	7,000
Total Purchases	4,07,000
Closing Sundry Creditors	50,000
Opening Bills Payable	20,000

4. <u>Profitability Ratio:</u>

- A profitability ratio is used to measure the profitability, which is a way to measure a company's performance.
- Profitability is simply the capacity to make a profit, and a profit is what is left over from income earned after you have deducted all costs and expenses related to earning the income.
- This ratio is used to measure the overall efficiency of the business.

a. **<u>Gross Profit Ratio:</u>**

- This ratio measures the relationship between gross profit and net sales.
- The objective of this ratio is to determine whether the business is in a position to meet out the day to day expenses or not.
- The formula used to determine the ratio is as under:

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

- Where;
- **Gross Profit=** Net Sales - Cost of Goods Sold
- **Net Sales=** Cash Sales + Credit Sales – Sales Return

<u>Question:</u> Calculate Gross Profit Ratio

Particulars	**Amount (₹)**
Sales	20,00,000
Purchases	11,50,000
Wages	80,000
Opening Stock	50,000
Interest received	3,000
Provision for tax	2,40,000
Office expenses	1,00,000
Carriage inward	20,000
Closing Stock	1,00,000
Fixed Assets	10,00,000
Equity Share Capital	1,00,000

b. Net Profit Ratio:

- This ratio measures the relationship between net profit and net sales.
- The objective of measuring this ratio is to determine the overall profitability of the business as well as how much shareholders can get after meet out all the expenses and compulsory liabilities.
- The formula is as under:

Net Profit Ratio= (Net profit / Net sales) x 100

- Where;
- Net Profit = Gross Profit + Indirect income – Indirect expenses

Question:

- If Cash sales is ₹ 43,000, Credit sales ₹ 77,000, Sales return ₹ 6,000, Opening stock ₹ 1,50,000, Purchases ₹ 2,70,000, Wages ₹ 80,000, Carriage outward ₹ 20,000, Closing Stock ₹ 4,20,000 and indirect expenses ₹ 5,500. Calculate net profit ratio.

c. Operating Profit Ratio:

- This ratio measures the relationship between operating profit and net sales.
- The objective of determining this ratio is to find out the operational efficiency of the management.
- The formula to determine this ratio is as under:

Operating profit ratio = (Operating profit / Net sales) × 100

- Where;
- Operating profit= Net Sales – Operating Cost

OR

- Operating profit= Net Profit + Non-operating expenses – Non-operating income

Question: Calculate Operating Profit Ratio

Trading & Profit and Loss Account

Particulars	Amount (₹)	Particulars	Amount (₹)
To Opening Stock	50,000	By Sales	20,00,000
To Purchases	11,50,000	By Closing Stock	1,00,000
To Wages	80,000	By Int. & Dividend on	
To Carriage Inward	20,000	Long-term investment	3,000
To Office expenses	1,00,000	By Profit on sale of Long-	
To Finance expenses	80,000	term investment	2,000
To Cash discount	10,000	By Compensation of	
To Bad debts	6,000	acquisition of Land	1,000
To Interest on bills payable	4,000		
To Interest on debentures	1,20,000		
To Value of furniture loss by			
fire	6,000		
To Provision for Tax	2,40,000		
To Net Profit c/d	2,40,000		