

Class-12
Accounting Ratio
2024-25

1. From the following, calculate current Ratio:

Trade Receivables (sundry Debtors)	7,20,000
Prepaid Expenses	1,60,000
Cash and cash equivalents	2,00,000
Marketable securities	2,00,000
Land and building	20,00,000
Bills payable	80,000
Sundry creditors	4,00,000
Debentures	16,00,000
Inventors	3,20,000
Expenses payable	3,20,000

Solution:

Calculation of current Assets

Current Assets = Trade receivable + prepaid expenses + cash & cash equivalents + marketable securities + inventories

$$= 720000+160000+200000+200000+320000$$

$$= 1600000$$

Calculation of current liabilities

Current liabilities = bills payable + sundry creditors + expenses payable

$$= 80000+400000+320000$$

$$= 800000$$

Calculation of current ratio

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{Current ratio} = \frac{1600000}{800000} \\ = 2:1$$

2. Calculation current ratio from the following information:

Particulars	₹	Particulars	₹
Total assets	20,00,000	Non-current liabilities	5,20,000
Fixed tangibles assets	10,00,000	Non-current Investments	6,00,000
Shareholder's funds	12,80,000		

Solution:-

Current assets = total assets – fixed tangible assets - noncurrent investment

$$= 200000 - 100000 - 60000 \\ = 40000$$

Calculation of current liabilities

Current liabilities = total assets – share holder's fund – noncurrent liabilities

$$= 200000 - 1280000 - 520000 \\ = 200000$$

Calculation of current ratio

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{Current ratio} = \frac{400000}{200000}$$

- 3. Current Assets 20,00,000, inventories 10,00,000, working capital 12,00,000. Calculate current ratio.**

Solution:

Calculation of current liabilities

Working capital = Current Assets – Current Liabilities

$$12,00,000 = 20,00,000 - \text{Current liabilities}$$

$$\begin{aligned}\text{Current liabilities} &= 20,00,000 - 12,00,000 \\ &= 80,00,000\end{aligned}$$

Calculation of current Ratio

$$\text{Current ration} = \frac{\text{curreet Assets}}{\text{Current liabilities}}$$

$$= \frac{20,00,000}{80,000}$$

$$= 2.5:1$$

- 4. Trade payables 50,000, Working capital 9,00,000, current liabilities 30,00,000. Calculate Current Ratio.**

Solution:

Calculation of current Assets

Working capital = Current Assets – Current Liabilities

$$9,00,000 = \text{Current Assets} - 3,00,000$$

$$\begin{aligned}\text{Current Asses} &= 9,00,000 + 3,00,000 \\ &= 12,00,000\end{aligned}$$

Calculation of Current Ratio

$$\text{Current ration} = \frac{\text{curreet Assets}}{\text{Current liabilities}}$$

$$= \frac{12,00,000}{3,00,000}$$

$$= 4:1$$

5. Working capital 6,00,000, Total Debt 27,00,000, Non-Current Liabilities 24,00,000. Calculate Current Ratio.

Solution:

Calculation of Current Liabilities

Total Debt = Non-current liabilities + Current Liabilities

27,00,000 = 24,00,000 + Current Liabilities

Current Liabilities = 27,00,000 – 24,00,000

= 3,00,000

Calculate of current Assets

Working capital = Current Assets – Current Liabilities

6,00,000 = Current Assets – 3,00,000

Current Assets = 6,00,000 + 3,00,000

= 9,00,000

Calculation of Current Ratio

Current ration = $\frac{\text{curreet Assets}}{\text{Current liabilities}}$

$$= \frac{9,00,000}{3,00,000}$$

$$= 3:1$$

6. Current Ratio is 2.5, working capital is 1,50,000. Calculate the amount of current Assets and Current Liabilities.

Solution:

Current Ratio = 2.5

Current ration = $\frac{\text{curreet Assets}}{\text{Current liabilities}}$

$$2.5 = \frac{C.A}{C.L}$$

C.A. = 2.5 C.L -----1

Working capital = Current Assets – current Liabilities

$$150000 = C.A - C.L.$$

C.A – C.L. = 1,50,000-----2

Putting Eq (1) into Eq (2)

$$1,50,000 = 2.5 C.L - C.L$$

$$1.5 C.L = 1,50,000$$

$$C.L = \frac{1,50,000}{1.5}$$

Current liabilities = 1,00,000

Putting C.L value in Eq (1)

$$\text{Current Assets} = 2.5 \times 1,00,000$$

$$= 2,50,000$$

- 7. Working capital is 18,00,000; trade payables 1,80,000; and other current liabilities are 4,20,000. Calculate Current Ratio.**

Solution:

Calculation of current liabilities

$$\text{Current liabilities} = \text{Trade payable} + \text{other current liabilities}$$

$$= 1,80,000 + 4,20,000$$

$$= 6,00,000$$

Calculation of current Assets

$$\text{Working capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$1,80,000 = \text{Current Assets} - 6,00,000$$

$$\text{Current Assets} = 24,00,000$$

Calculation of Current Ratio

$$\text{Current ratio} = \frac{\text{current Assets}}{\text{Current liabilities}}$$

$$= \frac{24,00,000}{6,00,000} = 4:1$$

- 8. Working capital 9,00,000; total debts (Liabilities) 19,50,000; Long-term Debts 15,00,000. Calculate Current Ratio.**

Solution:

Calculation of Current Liabilities

Total debts = Non-Current liabilities + Current liabilities

$$19,50,000 = 15,00,000 + \text{Current liabilities}$$

$$\text{Current liabilities} = 19,50,000 - 15,00,000$$

$$= 4,50,000$$

Calculation of Current Assets

Working capital = Current Assets – Current liabilities

$$9,00,000 = \text{Current Assets} - 4,50,000$$

$$\text{Current assets} = 9,00,000 + 4,50,000$$

$$= 13,50,000$$

Calculation of Current Ratio

$$\text{Current ration} = \frac{\text{curreet Assets}}{\text{Current liabilities}}$$

$$= \frac{13,50,000}{4,50,000}$$

$$= 3:1$$

- 9. Current Assets 7,50,000 and working capital is 2,50,000.
Calculate Current Ratio.**

Solution:

Calculation of Current Liabilities

Working capital = Current Assets – Current liabilities

$$2,50,000 = 7,50,000 - \text{Current liabilities}$$

$$\text{Current liabilities} = 5,00,000$$

Calculation of Current Ratio

$$\text{Current ratio} = \frac{\text{current Assets}}{\text{Current liabilities}}$$

$$= \frac{7,50,000}{5,00,000}$$

$$= 1.5:1$$

- 10.** A company had current Assets of 4,50,000 and current liabilities of 2,00,000. Afterwards it purchased goods for 30,000 on credit. Calculate current Ratio after the purchase.

Solution:

Calculation of Current Assets & Current Liabilities After Purchase

$$\text{Current Assets After purchase} = \text{Current Assets} + \text{Stock}$$

$$= 4,50,000 + 30,000$$

$$= 4,80,000$$

$$\text{Current liabilities After purchase} = \text{Current liabilities} + \text{Creditors}$$

$$= 2,00,000 + 30,000$$

$$= 2,30,000$$

Calculation of Current Ratio After purchase

$$= \frac{\text{current Assets After purchase}}{\text{Current liabilities After puurchase}}$$

$$= \frac{7,50,000}{5,00,000}$$

$$= 2.09:1$$

- 11.** Current liabilities of a company were 1,75,000 and its current Ratio was 2:1. It paid 30,000 to a creditor, calculate Ratio after payment.

Solution:

Calculation of current Assets before payment

Current liabilities = 1,75,000

Current Ratio = 2:1

$$\text{Current ratio} = \frac{\text{current Assets}}{\text{Current liabilities}}$$

$$2 = \frac{\text{current Assets}}{1,75,000}$$

Current Assets = 1,75,000 x 2

= 3,50,000

Calculation of current Assets after payment

Current Assets = 3,50,000 – 30,000 = 3,20,000

Current liabilities = 1,75,000 – 30,000 = 1,45,000

New current Ratio = $\frac{3,20,000}{1,45,000}$
After payment

2.21:1

- 12.** Ratio of current (3,00,000) to current liabilities (2,00,00) is 1.5:1. The accountant of the firm is interested in maintaining a current Ratio of 2:1 by paying off a part of the current liabilities. Compute amount of the current liabilities that should be paid so that the current Ratio at the level of 2:1 may be maintained.

Solution:

Current Assets = 3,00,000

Current liabilities = 2,00,000

The accountant of the firm wants to maintain current ratio as 2:1

Let the current liabilities paid off be X

$$2 = \frac{300000 - X}{200000 - X}$$

$$2(200000 - x) = 300000 - x$$

$$400000 - 2x = 300000 - x$$

$$X = 1,00,000$$

Thes, the liabilities to be paid off = 100000

- 13.** Ratio of current (8,75,000) to current liabilities (3,50,000) is 2.5:1. The firm wants to maintain current Ratio of 2:1 by purchasing goods on credit. Compute amount of goods that should be purchased on credit.

Solution:

Current Assets = 8,75,000

Current liabilities = 3,50,000

The accountant of the firm wants to maintain current ratio as 2:1

Let the goods purchased on credit be X

It would increase stock & creditors at the same time

As per the question:

$$= \quad 2 = \frac{8,75,000+x}{3,50,000+x}$$

$$2 (3,50,000 + x) = 8,75,000 + x$$

$$7,00,000 + 2x = 8,75,000 + x$$

$$X = 1,75,000$$

Thus good purchased on credit would be 1,75,000

14. A firm had current Assets of 5,00,000. It paid current liabilities of 1,00,000 and the current Ratio became 2:1. Determine current liabilities and working capital before and after the payment was made.

Solution:

Calculation of current Assets & Current liabilities before payment

Current Assets = 5,00,000

As per the question

$$\text{Current Ratio} = \frac{\text{current Assets}}{\text{Current liabilities}}$$

$$2 = \frac{500000 - 100000}{C.L - 100000}$$

$$2(C.L - 1,00,000) = 4,00,000$$

$$2 C.L - 2,00,000 = 4,00,000$$

$$= 2 C.L = 6,00,000$$

$$= \text{Current liabilities} = 3,00,000$$

Calculation of working capital before payment

$$= \text{current Assets before payment} = 5,00,000$$

$$= \text{current liabilities before payment} = 3,00,000$$

$$\text{Working capital} = \text{current Assets} - \text{current liabilities}$$

$$= 5,00,000 - 3,00,000$$

$$= 2,00,000$$

Calculation of working capital offer payment

$$C.A \text{ after payment} = 5,00,000 - 1,00,000 = 4,00,000$$

$$C.L \text{ offer payment} = 3,00,000 - 1,00,000 = 2,00,000$$

$$\text{Working capital after payment} = 4,00,000 - 2,00,000$$

$$= 2,00,000$$

- 15.** A firm had current liabilities of 5,40,000. It purchased stock of 60,000 on credit. After the purchase of stock. Current ratio was 2:1. Calculate current Assets and working capital after and before the stock was purchased.

Solution:

Current liabilities = 5,40,000

Stock purchased = 60,000

Current liabilities after = 5,40,000 + creditors of stock

$$= 5,40,000 + 60,000$$

$$= 6,00,000$$

Current ratio after stock Purchased
$$\frac{\text{current Assets} + \text{stock}}{\text{Current liabilities after stock purchased on credit}}$$

$$2 = \frac{\text{current Assets} + 60,000}{60,000}$$

Current Assets before stock purchased = 12,00,000 – 60,000 = 11,40,000

Current Assets after stock Purchased = Current Assets before stock purchased + stock
 $= 11,40,000 + 60,000 = 12,00,000$

Working capital before purchase = current Assets – current liabilities

$$\begin{aligned} & \text{After purchased} \quad \text{after purchased} \\ & = 12,00,000 - 6,00,000 \\ & = 6,00,000 \end{aligned}$$

16. State, giving reason, whether the current Ratio will improve or decline or will have no effect in each of the following transaction if current Ratio is 2:1:

- a) Cash paid to Trade payables.
- b) Bills payable discharged.
- c) Bills receivable endorsed to a creditor.
- d) Payment of final dividend already declared.
- e) Purchase of stock-in-Trade on credit.

- f) Bills receivable endorsed to a creditor dishonoured.
- g) Purchase of stock-in-Trade for cash.
- h) Sale of Fixed Assets (Book value of 50,000) for 45,000
- i) Sale of fixed assets (Book value of 50,000) for 60,000.

17. From the following information, calculate liquid Ratio:

Particulars	₹	Particulars	₹
Current Assets	4,00,000	Trade Receivables	2,00,000
Investment	1,00,000	Current Liabilities	1,40,000
Prepaid Expenses	20,000		

Solution:

Liquid Assets = Current Assets – Investment – Prepare Expenses

$$= 4,00,000 - 1,00,000 - 20,000$$

$$= 2,80,000$$

Current liabilities = 1,40,000

$$\text{Liquid Ratio} = \frac{\text{liquied Assets}}{\text{Current Liabilities}}$$

$$= \frac{2,80,000}{1,40,000} = 2:1$$

18. From the following information, calculate Quick Ratio:

Total Debt	12,00,000
Total Assets	16,00,000
Property, plant and Equipment (Fixed Assets)	6,00,000

Non-Current investments	1,00,000
Long- term Borrowings	4,00,000
Long-term provisions	4,00,000
Long-term Loans & Advances	1,00,000
Inventories	1,90,000
Prepaid Expenses	10,000

Solution:

$$\begin{aligned}\text{Current Liabilities} &= \text{Total Debt} - \text{Long-term Borrowings} \\ &= 1,20,000 - 4,00,000 - 4,00,000 \\ &= 4,00,000\end{aligned}$$

$$\begin{aligned}\text{Current} &= \text{Total Assets} - \text{Property, Plant \& Equipment} \\ &\quad - \text{Non Current investment} \\ &\quad - \text{Long term Loans \& advance} \\ &= 16,00,000 - 6,00,000 - 1,00,000 - 1,00,000 \\ &= 8,00,000\end{aligned}$$

$$\begin{aligned}\text{Quick Assets} &= \text{Current Assets} - \text{prepaid Expenses} - \text{Inventories} \\ &= 8,00,000 - 10,000 - 1,90,000 \\ &= 6,00,000\end{aligned}$$

$$\text{Quick Ratio} = \frac{6,00,000}{4,00,000} = 1.5:1$$

- 19.** Quick Assets 3,00,000; Inventory (Stock) 80,000; prepaid Expenses 20,000; Working capital 2,40,000. Calculate Current Ratio.

Solution:

$$\text{Quick Assets} = \text{C.A} + \text{Inventories} + \text{Prepaid Expenses}$$

$$3,00,000 + 80,000 + 2,000$$

$$\text{Current Assets} = 4,00,000$$

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$2,40,00 = 4,00,000 - \text{Current Liabilities}$$

$$\text{Current Liabilities} = 4,00,000 - 2,40,000$$

$$= 1,60,000$$

$$\text{Current Ratio} = \frac{4,00,000}{1,60,000} = 2.5:1$$

20. Current Assets 6,00,000; Investment 1,20,000; working capital 5,04,000. Calculate Quick Ratio.

Solution:

$$\text{Quick Assets} = \text{Current Assets} - \text{Inventories}$$

$$= 6,00,000 - 1,20,000$$

$$= 4,80,000$$

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$5,04,000 = 6,00,000 - \text{Current Liabilities}$$

$$\text{Current liabilities} = 96,000$$

$$\text{Quick Ratio} = \frac{4,80,000}{96,000} = 5:1$$

- 21. Current Liabilities of a company are 6,00,000. Its Current Ratio is 3:1 and Liquid Ratio is 1:1. Calculate value of Inventory.**

Solution:

Calculation of Current Assets

Current Liabilities = 6,00,000

Current Ratio = 3:1

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

$$3 = \frac{C.A}{C.L}$$

$$C.A = 3 \text{ C.L} \text{ -----(1)}$$

$$C.A = 3 \times 6,00,000$$

$$= 18,00,000$$

Calculation of Inventors

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

$$\text{Liquid Ratio} = \frac{\text{Current Assets} - \text{inventories}}{\text{Current Liabilities}}$$

$$1 = \frac{\text{Current Assets} - \text{inventories}}{6,00,000}$$

$$C.A - \text{Inventories} = 6,00,000$$

$$18,00,000 - \text{Inventories} = 6,00,000$$

$$\text{Inventories} = 12,00,000$$

- 22. Moon Ltd. has a Current Ratio of 3.5:1 and Quick Ratio of 2:1. If the inventories is 24,000; calculate total Current Liabilities and Current Assets.**

Solution:

Give Information:

Current Ratio = 3.5:1

Quick Ratio = 2:1

Inventories = 24,000

Current Liabilities = ?

Current Assets = ?

Calculation of Current Assets & Current Liabilities

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

$$\begin{aligned} 3.5 &= \frac{C.A}{C.L} \\ 3.5 \text{ C.L} &= \text{C.A} \text{ -----(1)} \end{aligned}$$

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

$$= \frac{C.A - \text{Inventories}}{\text{Current Liabilities}}$$

$$2 = \frac{C.A - 24,000}{\text{Current Liabilities}}$$

$$2 \text{ C.L} = \text{C.A} - 24,000 \text{ -----(2)}$$

from (1) & (2) Equation

$$2 \text{ C.L} = 3.5 \text{ C.L} - 24,000$$

$$3.5 \text{ C.L} - 2 \text{ C.L} = 24,000$$

$$1.5 \text{ C.L} = 24,000$$

$$\text{C.L} = 24,000 / 1.5$$

$$\text{Current Liabilities} = 16,000$$

pulling value of C.L in (1) Equation

$$\text{C.A} = 3.5 \text{ C.L}$$

$$\text{C.A} = 3.5 \times 16,000$$

$$\text{Current Assets} = 56,000$$

- 23. Umesh Ltd. has current Ratio of 4,5:1 and a Quick Ratio of 3:1. If its inventory is 36,000. find out its total Current Assets and total Current liabilities.**

$$\text{Current Ratio} = \text{Liquid Ratio} = \frac{\text{C.A}}{\text{C.L}}$$

$$4.5 = \frac{\text{C.A}}{\text{C.L}}$$

$$4.5 = \frac{\text{C.A}}{\text{C.L}}$$

$$4.5 \text{ C.L} = \text{C.A} \text{ -----(1)}$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$= \frac{\text{C.A} - \text{Inventory}}{\text{C.L}}$$

$$3 = \frac{\text{C.A} - 36,000}{\text{C.L}} \text{ -----(2)}$$

From (1) & (2) Equation

$$3 \text{ C.L} = 4.5 \text{ C.L} - 36,000$$

$$1.5 \text{ C.L} = 36,000$$

$$\text{Current Liabilities} = \frac{36,000}{1.5} = 24,000$$

Putting C.L value in (1) Equation

$$4.5 \text{ C.L} = \text{C.A}$$

$$\text{C.A} = 4.5 \times 24,000$$

$$\text{C.A} = 10,8000$$

quick Assets = C.A Inventories

$$= 10,800 - 36,000$$

$$= 7,200$$

24. Current Ratio 4; Liquid Ratio 2.5; Inventory 6,00,000. Calculate Liabilities, Current Assets and Liquid Assets.

Solution:

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

$$4 = \frac{\text{C.A}}{\text{C.L}}$$

$$4 \text{ C.L} = \text{C.A} \text{ -----(1)}$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$2.5 = \frac{\text{C.A} - \text{Inventory}}{\text{C.L}}$$

$$2.5 = \frac{\text{C.A} - 6,00,000}{\text{C.L}}$$

$$2.5 \text{ C.L} = \text{C.A} - 6,00,000 \text{ -----(2)}$$

From (1) & (2) Equation

$$2.5 \text{ C.L} = 4 \text{ C.L} - 6,00,000$$

Form (1) & (2) Equation

$$2.5 \text{ C.L} = 4 \text{ C.L} - 6,00,000$$

$$1.5 \text{ C.L} = 6,00,000$$

$$\text{C.L} = \frac{6,00,000}{1.5}$$

$$\text{Current Liabilities} = 4,00,000$$

Putting C.L in Equatin -----(1)

$$4 \text{ C.L} = \text{C.A}$$

$$\text{C.A} = 4 \times 4,00,000$$

$$= 16,00,000$$

$$\text{Quick Assets} = \text{C.A} - \text{Investment}$$

$$= 16,00,000 - 6,00,000$$

$$= 10,00,000$$

25. Current Liabilities of a company are 1,50,000. Its Current Ratio is 3:1 and Acid Test Ratio (Liquid Ratio) is 1:1. Calculate values of Current Assets, Liquid Assets and inventory.

Solution:

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

$$3 = \frac{\text{C.A}}{\text{C.L}}$$

$$3 \text{ C.L} = \text{C.A} \text{-----(1)}$$

$$\text{C.A} = 3 \times 1,50,000$$

$$\text{Current Assets} = 4,50,000$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$1 = \frac{\text{Quick Assets}}{1,50,000}$$

$$\text{Quick Assets} = 1,50,000$$

$$\text{Quick Assets} = \text{C.A} - \text{Inventories}$$

$$1,50,000 = 4,50,000 - \text{inventories}$$

$$\text{Inventories} = 3,00,000$$

26. Xolo Ltd's liquidity Ratio is 2.5; 1. Inventory is 6,00,000. Current Ratio is 4 : 1. Find out the current liabilities.

Solution:

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

$$4 = \frac{C.A}{C.L}$$

$$C.A = 4 C.L \text{ -----(1)}$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$2.5 = \frac{C.A - \text{Inventory}}{C.L}$$

$$2.5 = \frac{C.A - 6,00,000}{C.L}$$

From (1) & (2) Equation

$$2.5 C.L = 4 C.L - 6,00,000$$

$$1.5 C.L = 6,00,000$$

$$C.L = \frac{6,00,000}{1.5}$$

$$C.L = 4,00,000$$

27. Current Assets of a company are 5,00,000. Its Current Ratio is 2.5 : 1 and Quick Ratio is 1 : 1. Calculate values of Current Liabilities, Liquid Assets and inventory.

Solution:

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

$$2.5 = \frac{C.A}{C.L}$$

$$2.5 \text{ C.L} = \text{C.A} \text{ -----(1)}$$

$$\text{C.L} = \frac{5,00,000}{2.5}$$

$$\text{Current Liabilities} = 2,00,000$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$\frac{\text{Quick Assets}}{2,00,000}$$

$$\text{Quick Assets} = 2,00,000$$

$$\text{Quick Assets} = \text{Current Assets} - \text{Inventories}$$

$$2,00,000 = 5,00,000 - \text{Inventories}$$

$$\text{Inventories} = 5,00,000 - 2,00,000$$

$$= 3,00,000$$

28. Working Capital of a company is 3,60,000; Total Debts 7,80,000; Long-term Debts 6,00,000; Inventories 1,80,000. Calculate Liquid Ratio.

Solution:

$$\text{Working capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$3,60,000 = C.A - C.L \text{ -----(1)}$$

$$\text{Total Debts} = \text{Non Current Liabilities} + \text{Current Liabilities}$$

$$7,80,000 = 6,00,000 + C.L$$

$$\text{Current Liabilities} = 1,80,000$$

Putting C.L value in Equation -----(1)

$$3,60,000 = C.A - 1,80,000$$

$$\text{Current Assets} = 5,40,000$$

$$\text{Quick Assets} = \text{Current Assets} - \text{Inventories}$$

$$= 5,40,000 - 1,80,000$$

$$\text{Quick Assets} = 3,60,000$$

$$\begin{aligned} \text{Liquid Ratio} &= \frac{\text{Quick Assets}}{\text{Current Liabilities}} \\ &= \frac{3,60,000}{1,80,000} = 2:1 \end{aligned}$$

29. Calculate Quick Ratio from the following:

Working Capital 4,00,000; Total Debts 18,00,000; Non-Current 16,00,000; Inventories 1,90,000; prepaid Expenses 10,000.

Solution:

$$\begin{aligned} \text{Quick Ratio} &= \frac{\text{Quick Assets}}{\text{Current Liabilities}} \\ &= \frac{4,00,000}{2,00,000} = 2:1 \end{aligned}$$

Working Note:

Total Debts = Non Current Liabilities + Current Liabilities

18,00,000 = 16,00,000 + Current Liabilities

Current Liabilities = 18,00,000 - 16,00,000

= 2,00,000

Working Capital = Current Assets - Current Liabilities

4,00,000 = Current Assets - 2,00,000

Current Assets = 6,00,000

Quick Assets = Current Assets - Inventories - prepaid expenses

= 6,00,000 - 1,90,000 - 10,000

= 4,00,000

30. Quick Ratio of a company is 2 : 1. State, giving reasons, which of the following transactions would

I. Improve

II. Reduce

III. Not change the Quick Ratio;

a) Purchase of goods for cash **reduce**

b) Purchase of goods on credit **reduce**

c) Sale of goods (Costing 20,000) for 20,000; **improve**

d) Sale of goods (costing 20,000) for 22,000; **improve**

e) Cash received from Trade Receivables. **No change**

31. Quick Ratio of Z Ltd. is 1 : 1. state, with reason, which of the following transactions would

- I. Increase
- II. Decrease or
- III. Not change the ratio:
 - a) included in the trade payables was bill payable of 3,000 which was met on maturity;
 - b) Debentures of 50,000 were converted into equity shares.

Ans-a. no change

b. increase

32. The Quick Ratio of a company is 0.8 : 1. State, with reason, whether the following transactions will increase, decrease or not change the Quick Ratio:

- I. purchase of loose tools for 2,000;
- II. Insurance premium paid in advance 500;
- III. sale of goods on credit 3,000;
- IV. Honoured a bills payable of 5,000 on maturity.

[ans- I decrease ii decrease iii increase iv decrease]

33. Venus Ltd.'s Inventory is 3,00,000. Total Liquid Assets are 12,00,000 and Quick Ratio is 2 :1. Work out Current Ratio.

Solution:

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

$$2 = \frac{12,00,000}{\text{Current Liabilities}}$$

$$\begin{aligned}
 \text{Current Liabilities} &= 6,00,000 \\
 \text{Current Assets} &= \text{Liquid Assets} + \text{Inventory} \\
 &= 12,00,000 + 3,00,000 \\
 &= 15,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\
 &= \frac{15,00,000}{6,00,000} = 2.5:1
 \end{aligned}$$

34. Total Assets 11,00,000; Fixed Assets 5,00,000; Capital Employed 10,00,00. There were no Long-term Investments. Calculate Current Ratio.

Solution:

Total Assets = Non-Current Assets + non Current Investment + Current Assets

$$11,00,000 = 5,00,000 + 0 + \text{Current Assets}$$

$$\text{Current Assets} = 6,00,000$$

$$= \text{Total Assets} = \text{Capital Employed} + \text{Current Liabilities}$$

$$11,00,000 = 10,00,000 + \text{Current Liabilities}$$

$$= \text{Current Liabilities} = 1,00,000$$

$$\begin{aligned}
 \text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\
 &= \frac{6,00,000}{1,00,000} = 6:1
 \end{aligned}$$

35. Capital Employed 20,00,000; Fixed Assets 14,00,000; Current Liabilities 2,00,000. There are no Long-term Investments. Calculate Current Ratio.

Solution:

Total Assets = Capital Employed + Current Liabilities

$$= 20,00,000 + 2,00,000$$

$$= 22,00,000$$

Total Assets = fixed Assets + Current Assets

$$22,00,000 = 14,00,000 + \text{Current Assets}$$

$$\text{Current Assets} = 8,00,000$$

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

$$= \frac{8,00,000}{2,00,000} = 4 : 1$$

36. From the following calculate: (i) Current Ratio (ii) Quick Ratio:

Total Debt 12,00,000

Total Assets 16,00,000

property, plant and Equipment 6,00,000

Non-Current Investment 1,00,000

Long-term Loans and Advances 1,00,000

Long-term Borrowings 4,00,000

Long-term provisions 4,00,000

Inventories	1,90,000
Prepaid Expenses	10,000

Solution:

**Total Debt = Long term Borrowings + Long Term provision +
Current Liabilities**

12,00,00 = 4,00,000 + 4,00,000 + Current Liabilities

Current Liabilities = 4,00,000

**Total Assets = Fixed Assets + Non current investments + Long
term loans & Advances + Current Assets**

16,00,000 = 6,00,000 + 1,00,000 + 1,00,000 + Current Assets

Current Assets = 8,00,000

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

= $\frac{8,00,000}{2,00,000}$ = 2: 1

Quick Assets = Current Assets - Inventories - Prepaid expenses

= 8,00,000 - 1,90,000 - 10,000

= 6,00,000

Quick Ratio = $\frac{\text{Quick Assets}}{\text{Current Liabilities}}$

Quick Ratio = $\frac{6,00,000}{4,00,000}$ = 1.5 : 1

37. Following is the Balance Sheet of Crescent Chemical Works Limited as at 31st March, 2023:

Particulars	Note No.	
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share capital		70,000
(b) Reserve and surplus		35,000
2. Non-Current Liabilities		
Long-term Borrowings		25,000
3. Current Liabilities		
(a) Short-term Borrowings		3,000
(b) Trade payables (Creditors)		13,000
(c) Short-term provisions: for Tax		4,000
Total		<u>1,50,000</u>
II. ASSETS		
1. Non-current Assets		45,000
(a) property, plant and equipment and intangible Assets; Plant and Equipment		5,000
(b) Non-current Investments		
2. Current Assets		
(a) Inventories (Stock)		50,000
(b) Trade Receivables (Debtors)		30,000
(c) Cash and Cash Equivalents		<u>20,000</u>
Total		<u>1,50,000</u>

$$\begin{aligned}
 \text{Current Assets} &= \text{Inventories} + \text{Debtors} + \text{Cash \& Cash Equivalents} \\
 &= 50,000 + 30,000 + 20,000 \\
 &= 1,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Current Liabilities} &= \text{Short term Borrowings} + \text{Trade payable} + \text{Short term provision} \\
 &= 3000 + 13,000 + 4,000 \\
 &= 20,000
 \end{aligned}$$

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

$$= \frac{1,00,000}{20,000} = 5:1$$

$$\begin{aligned}
 \text{Liquid Assets} &= \text{Current Assets} - \text{Inventories} \\
 &= 1,00,000 - 50,000 \\
 &= 50,000
 \end{aligned}$$

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

$$= \frac{50,000}{20,000} = 2.5:1$$

38. Total Assets 2,60,000; Total Debts 1,80,000; Current Liabilities 20,000. Calculate Debt to equity Ratio.

Solution:

Total Debt = Long term Debts + Current Liabilities

1,80,000 = long term debts + 20,000

Long term debts = 1,60,000

Total Assets = Share holder's funds + Total debts

$$2,60,000 = \text{share holder's funds} + 1,80,000$$

$$\text{Share holders funds (Equity)} = 80,000$$

$$\begin{aligned} \text{Debts to Equity Ratio} &= \frac{\text{Debt}}{\text{Equity}} \\ &= \frac{1,60,000}{80,000} = 2 : 1 \end{aligned}$$

39. calculate Debt to Equity Ratio: Equity share capital 5,00,000; General Reserve 90,000; Accumulated profits 50,000; 10% Debentures 1,30,000; Current Liabilities 1,00,000.

Solution:

**Share holders funds = equity share capital + general reserve +
Accumulated profits**

$$= 5,00,000 + 90,000 + 50,000$$

$$= 6,40,000$$

Debt = 10% Debentures

$$1,30,000$$

$$\begin{aligned} \text{Debt to Equity ratio} &= \frac{\text{Debt}}{\text{Equity}} \\ &= \frac{1,30,000}{6,40,000} \end{aligned}$$

$$\text{Debt to Equity Ratio} = 0.203$$

40. From the following information, calculate debt to equity ratio:

10,000 Equity shares of 10 each fully paid	2,00,000
5,000, 9% preference shares of 10 each fully paid	1,00,000
General Reserve	90,000
Surplus, i.e., Balance in Statement of profit & Loss	40,000
10% Debentures	1,50,000
Current Liabilities	1,00,000

Solution:

$$\begin{aligned}\text{Share holder's Funds} &= \text{Equity share} + \text{preference share} + \text{General} \\ &\quad \text{reserve} + \text{surplus, i.e. Balance in statement of profit \& loss} \\ &= 2,00,000 + 1,00,000 + 90,000 + 40,000\end{aligned}$$

$$\text{Share holder's funds} = 4,30,000$$

$$\begin{aligned}\text{Debts} &= 10\% \text{ } 1,50,000 \\ &= 1,50,000\end{aligned}$$

$$\begin{aligned}\text{Debt to Equity Ratio} &= \frac{1,50,000}{4,30,000} \\ &= 0.348 \\ &= 0.35\end{aligned}$$

41. Balance Sheet had the following amounts as at 31st March, 2023;

10% preference share capital	5,00,000
Equity share capital	15,00,000

Security premium reserve	1,00,000
Reserve and surplus	4,00,000
long-term loan from IDBI @ 9%	30,00,000
Current Assets	12,00,000
Current Liabilities	8,00,000
Investment (in other companies)	2,00,000
Property, plant and Equipment - cost	60,00,000
Depreciation written off	14,00,000

Calculate ratios indicating the Long-term and the short-term financial position of the company.

solution:

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

$$= \frac{1,20,000}{8,00,000}$$

$$\text{Current Ratio} = 1.5:1$$

Equity = preference share = Equity share + Reserve & Surplus

$$= 5,00,000 + 15,00,000 + 4,00,000$$

$$= 24,00,000$$

Debt = Long term loan form IDBI @ 9%

$$= 30,00,000$$

$$\text{Debt to Equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \frac{30,00,000}{24,00,000} = 1.25:1$$

42. Calculate Debt to Equity Ratio from the following information:

Property, plant and equipment (Gross)	8,40,000
Accumulated Depreciation	1,40,000
Non-current investment	14,000
Long-term Loss and Advances	56,000
Current Assets	3,50,000
Current Liabilities	2,80,000
10% Long-term Borrowings	4,20,000
Long-term Provisions	1,40,000

Solution:

$$\begin{aligned} \text{Debt} &= \text{Long-term Borrowings} + \text{Long term provisions} \\ &= 4,20,000 + 1,40,000 \\ &= 5,60,000 \end{aligned}$$

$$\text{Equity} = \text{Total Assets} - \text{Total Outside Liabilities}$$

$$\begin{aligned} \text{Total Assets} &= (\text{Fixed Assets} - \text{Acc. Depreciation}) + \text{Non-current Investment} + \text{Long-term loans and Advances} + \text{Current Assets} \\ &= (8,40,000 - 1,40,000) + 14,000 + 56,000 + 3,50,000 \\ &= 11,20,000 \end{aligned}$$

Total outside liabilities = Non-current liabilities + current Liabilities

$$= 5,60,000 + 2,80,000 = 8,40,000$$

Equity = Total Assets - Total outside liabilities

$$= 11,20,000 - 8,40,000 = 2,80,000$$

$$\text{Debt to Equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \frac{5,600,000}{2,80,000} = 2:1$$

- 43.** From the following information, calculate Debt to equity share ratio: Total Debts 6,00,000; current liabilities 2,00,000 and capital employed 6,00,000.

Solution:

Total Debts = Non-Current liabilities + Current liabilities

$$6,00,000 = \text{Non-current liabilities} + 2,00,000$$

$$\text{Non-current liabilities (debt)} = 4,00,000$$

capital employed = equity + non-current liabilities

$$6,00,000 = \text{equity} + 4,00,000$$

$$\text{Equity} = 2,00,000$$

$$\text{Debt to Equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \frac{4,00,000}{2,00,000} = 2:1$$

- 44.** Calculate Debt to Equity Ratio: Total Assets 14,00,000; Total debt 12,00,000; capital employed 10,00,000.

Solution:

$$\text{Equity} = \text{Total Assets} - \text{Total Debts}$$

$$= 14,00,000 - 12,00,000$$

$$= 2,00,000$$

$$\text{Capital Employed} = \text{Equity} + \text{Debt (Non-Current liabilities)}$$

$$10,00,000 = 2,00,000 + \text{Debt (Non-current liabilities)}$$

$$\text{Debt (Non-current liabilities)} = 8,00,000$$

$$\text{Debt to Equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \frac{8,00,000}{2,00,000} = 4:1$$

- 45.** Capital Employed 8,00,000; shareholder's funds 2,00,000. Calculate Debt to Equity Ratio.

Solution:

$$\text{Debt} = \text{Capital Employed} - \text{Share holders funds}$$

$$= 8,00,000 - 2,00,000$$

$$= 6,00,000$$

$$\text{Share holders funds (Equity)} = 2,00,000$$

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

- 46.** King Ltd has current ratio of 2.5:1. Its working capital is 1,20,000. Total Assets are of 3,80,000 and Total Debt of 2,80,000. Calculate Debt to equity ratio.

Solution:

$$\text{Current Ratio} = 2.5:1$$

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

$$2.5 = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$2.5 \text{ C.L} = \text{C.A} \quad \text{-----(1)}$$

$$\text{Working capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$1,20,00 = \text{C.A} - \text{C.L} \quad \text{-----(2)}$$

putting equation (1) value in equation (2)

$$1,20,000 = 2.5 \text{ C.L} - \text{C.L}$$

$$\text{C.L} = \frac{1,20,000}{1.5}$$

$$\text{Current liabilities} = 80,000$$

$$\text{Debt (Non-current liabilities)} = \text{Total Debt} - \text{Current liabilities}$$

$$= 2,80,000 - 80,000$$

$$= 2,00,000$$

$$\text{Equity (Share holder's funds)} = \text{Total Assets} - \text{Total Debts}$$

$$= 3,80,000 - 2,80,000$$

$$= 1,00,000$$

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

- 47.** Monica Ltd. has Quick Ratio of 1.5 : 1. Its working capital is 1,20,000 and its inventories are of 80,000. Total Assets of 3,80,000 and total debts of 2,80,000. Calculate Debt to equity Ratio.

Solution:

$$\begin{aligned}\text{Quick Ratio} &= \frac{\text{Quick Assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}\end{aligned}$$

$$1.5 = \frac{\text{Current Assets} - 80,000}{\text{Current Liabilities}}$$

$$1.5 \text{ C.L} = \text{C.A} - 80,000$$

$$\text{C.A} = 1.5 \text{ C.L} + 80,000 \text{ -----(1)}$$

Working capital = Current Assets - Current liabilities

$$1,20,000 = \text{C.A} - \text{C.L} \text{ -----(2)}$$

Putting C.A Value from Eq (1) into Eq (2)

$$1,20,000 = 1.5 \text{ C.L} + 80,000 - \text{C.L}$$

$$5 \text{ C.L} = 40,000$$

$$\text{Current Liabilities} = \frac{40,000}{5} = 80,000$$

Debt (Non-current liabilities) = Total Debt - Current liabilities

$$= 2,80,000 - 80,000$$

$$= 2,00,000$$

$$\text{Equity (share holder's funds)} = \text{Total Assets} - \text{Total Debt}$$

$$= 3,80,000 - 2,80,000$$

$$= 1,00,000$$

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

48. When Debt to Equity Ratio is 2, State, giving reason, whether this ratio will increase, decrease or will have no change in each of the following cases;

- I. Sale of land (Book value 4,00,000 for 5,00,000);
- II. issue of equity share for the purchase of plant and machinery worth 10,00,000;
- III. issue of preference shares for redemption of 13% Debentures, worth 10,00,000.

49. Debt to equity ratio of a company is 0.5 : 1. Which of the following would increase, decrease or not change it:

- I. Issue of Equity shares;
- II. Cash received from debtors;
- III. Redemption of debentures
- IV. Purchased good on credit?

50. Assuming that the debt to Equity ratio is 2 : 1, state, giving reasons, which of the following transactions would (i) Increase (ii) Decrease (iii) Not alter Debt to equity Ratio.

- I. Issue of new share for cash.
- II. Conversion of debentures into equity shares.
- III. Sale of fixed assets at profit.
- IV. Purchase of a fixed asset on long-term deferred payment basis.
- V. Payment to Creditors.

51. From the following Balance Sheet to ABC Ltd. as at 31st March, 2023, Calculate Debt to Equity Ratio.

Particulars	Note No.	
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share capital		
(i) Equity share capital	5,00,000	
(ii) 10% preference share capital	<u>5,00,000</u>	10,00,000
(b) Reserve and surplus		2,40,000
2. Non-Current Liabilities		
Long-term Borrowings (Debentures)		2,50,000
3. Current Liabilities		
(a) Trade payables		4,30,000
(b) Other current liabilities		20,000
(c) Short-term provisions: for Tax		3,00,000
Total		22,40,000
II. ASSETS		
1. Non-current Assets		

Property, Plant and Equipment and intangible Assets:		
(i) property, plant and equipment		6,40,000
(ii) Intangible Assets		1,00,000
2. Current Assets		
(a) Inventories		7,50,000
(b) Trade Receivables		6,40,000
(c) Cash and Cash Equivalents		1,10,000
Total		22,40,000

Solution:

Debt = Long term Borrowings

= 2,50,000

Equity = Equity share Capital + 10% preference share

capital reserve & Surplus

= 5,00,000 + 5,00,000 + 2,40,000

= 12,40,000

$$\begin{aligned}
 \text{Debt to equity ratio} &= \frac{\text{Debt}}{\text{Equity}} \\
 &= \frac{2,50,000}{12,40,000} = 0.2016:1 \\
 &= 0.2:1
 \end{aligned}$$

52. Calculate total Assets to Debt ratio from the following information:

Long-term Debts 4,00,000; Total Assets 7,70,000.

Solution:

$$\text{Total Assets} = 7,70,000$$

$$\text{Long-term Debts (Debts)} = 4,00,000$$

$$\begin{aligned}\text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{7,70,000}{4,00,000} \\ &= 1.925 : 1\end{aligned}$$

- 53.** Shareholder's Funds 1,60,000; Total Debts 3,60,000; current Liabilities 40,000.
Calculate Total Assets to Debt Ratio.

Solution:

$$\begin{aligned}\text{Total Assets} &= \text{Share holder's Funds} + \text{Total Debts} \\ &= 1,60,000 + 3,60,000 \\ &= 5,20,000\end{aligned}$$

$$\text{Total Debts} = \text{Non-current liabilities} + \text{current liabilities}$$

$$3,60,000 = \text{Non-current liabilities} + 40,000$$

$$\text{Non-current liabilities (Debt)} = 3,20,000$$

$$\begin{aligned}\text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{5,20,000}{3,20,000} \\ &= 1.625 : 1\end{aligned}$$

- 54.** Total Debt 60,00,000; Shareholder's funds 10,00,000; Reserve and surplus 2,50,000; Current Assets 25,00,000; Working Capital 5,00,000. Calculate Total Assets to Debt Ratio.

Solution:

$$\text{Total Assets} = \text{Total Debt} + \text{Share holder's Funds}$$

$$= 60,00,000 + 10,00,000$$

$$= 70,00,000$$

$$\text{Working Capital} = \text{Current Assets} - \text{Current liabilities}$$

$$5,00,000 = 25,00,000 - \text{Current Liabilities}$$

$$\text{Current Liabilities} = 20,00,000$$

$$\text{Total Debt} = \text{Non-Current Liabilities} + \text{Current Liabilities}$$

$$60,00,000 = \text{Non-Current Liabilities} + 20,00,000$$

$$\text{Non-Current Liabilities} = 40,00,000$$

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

$$= \frac{70,00,000}{40,00,000}$$

$$= 1.75 : 1$$

- 55.** Total Debt 15,00,000; Current liabilities 5,00,000; Capital Employed 15,00,000. Calculate Total Assets to Debt Ratio.

Solution:

$$\text{Total Assets} = \text{Capital Employed} + \text{Current Liabilities}$$

$$= 15,00,000 + 5,00,000$$

$$= 20,00,000$$

Total Debt = Non-Current Liabilities + Current Liabilities

$$15,00,000 = \text{Non-Current Liabilities} + 5,00,000$$

$$\text{Non-Current Liabilities} = 10,00,000$$

$$\begin{aligned} \text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{20,00,000}{10,00,000} = 2 : 1 \end{aligned}$$

- 56.** Total Debt 12,00,000; Shareholders funds 2,00,000; Reserve and surplus 50,000; Current Assets 5,00,000; Working capital 1,00,000. Calculate Total Assets to Debt Ratio.

Solution:

Total Assets + Shareholder's + Total Debt

$$= 2,00,000 + 12,00,000$$

$$= 14,00,000$$

Working capital = Current Assets - Current Liabilities

$$1,00,000 = 5,00,000 - \text{Current liabilities}$$

$$\text{Current Liabilities} = 4,00,000$$

Total Debt = Non-Current Liabilities + Current Liabilities

$$12,00,000 = \text{N.C.L (Debt)} + 4,00,000$$

$$\text{Non-Current liabilities (Debt)} = 8,00,000$$

$$\begin{aligned}\text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{14,00,000}{8,00,000} = 1.75 : 1\end{aligned}$$

57. Calculate Total Assets to Debt Ratio from the following information:

Particulars	₹	Particulars	₹
Total assets	15,00,000	Bills payable	60,000
Total Debts	12,00,000	Bank Overdraft	50,000
Creditors	90,000	Outstanding Expenses	20,000

Solution:

$$\begin{aligned}\text{Current Liabilities} &= \text{Creditors} + \text{Bills payable} + \text{Bank Overdraft} + \\ &\quad \text{Outstanding Expenses} \\ &= 90,000 + 60,000 + 50,000 + 20,000 \\ &= 2,20,000\end{aligned}$$

Total Debt = Non-Current Liabilities + Current Liabilities

$$12,00,000 = \text{Non-Current Liabilities} + 2,20,000$$

$$\text{Non Current Liabilities (Debt)} = 9,80,000$$

$$\begin{aligned}\text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{15,00,000}{9,80,000} = 1.53 : 1\end{aligned}$$

58. Calculate 'Total Assets to Debt Ratio' From the following information:

Equity share capital	4,00,000
Long-term Borrowing	1,80,000
Surplus, i.e., Balance of P & L	1,00,000
General Reserve	70,000
Current Liabilities	30,000
Long-term provisions	1,20,000

Solution:

Debt = Long term borrowings + Long term provisions

$$= 1,80,000 + 1,20,000$$

$$= 3,00,000$$

Share holder's funds = Equity share capital + Surplus profit &

Loss + General Reserve

$$= 4,00,000 + 1,00,000 + 70,000$$

$$= 5,70,000$$

Total Assets = Share holder's funds + Non-Current liabilities

(Debt) + Current Liabilities

$$= 5,70,000 + 3,00,000 + 30,000$$

$$= 9,00,000$$

Total Assets = Share holder's funds + Non-Current liabilities

(Debt) + Current Liabilities

$$= 5,70,000 + 3,00,000 + 30,000$$

$$= 9,00,000$$

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

$$= \frac{9,00,000}{3,00,000} = 3 : 1$$

59. From the following information, calculate Total Assets to debt Ratio:

property, plant and Equipment (Gross)	6,00,000
Non-Current Investment	10,000
Current Assets	2,50,000
Long term Borrowings	3,00,000
Accumulated Depreciation	1,00,000
Long-term Loans and Advances	40,000
Current Liabilities	2,00,000
Long-term provisions	1,00,000

Solution:

Total Assets = [Fixed Assets (Gross) - Acc. Depreciation] + Non Current investment + Long term loans & advances + Current Assets

$$= (6,00,000 - 1,00,000) + 10,000 + 40,000 + 2,50,000$$

$$= 5,00,000 + 10,000 + 40,000 + 2,50,000$$

$$= 8,00,000$$

Debt = Long term Borrowings + Long term provisions

$$= 3,00,000 + 1,00,000$$

$$= 4,00,000$$

$$\begin{aligned} \text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{8,00,000}{4,00,000} = 4 : 1 \end{aligned}$$

60. From the following information, calculate proprietary Ratio:

Share capital 3,00,000

Non-Current Assets 13,20,000

Reserve and Surplus 1,80,000

Current Assets 6,00,000

Solution:

Total Assets = Non-Current Assets + Current Assets

$$= 13,20,000 + 6,00,000$$

$$= 19,20,000$$

Share holder's funds = Share capital + Reserve & Surplus

$$= 3,00,000 + 1,80,000$$

Share holder's funds = 4,80,000

$$\text{Property Ratio} = \frac{\text{Shareholder's funds}}{\text{Total Assets}}$$

$$= \frac{4,80,000}{19,20,000}$$

$$= 0.25: 1$$

61. From the following information, calculation proprietary Ratio:

Equity share capital	3,00,00
Preference share capital	1,50,000
Reserves and surplus	75,000
Debentures	1,80,000
Trade payables	<u>45,000</u>
	<u>7,50,000</u>
Property, plant and equipment	3,75,000
Short-term investments	2,25,000
Other current Assets	<u>1,50,000</u>
	<u>7,50,000</u>

Solution:

Total Assets = fixed Assets + Short terms investments + others Current Assets

$$= 3,75,000 + 2,25,000 + 1,50,000$$

$$= 7,50,000$$

Shareholder's funds = equity share capital + preference share Capital + reserves & surplus

$$= 3,00,000 + 1,50,000 + 75,000$$

$$= 5,25,000$$

$$\begin{aligned}
 \text{Property Ratio} &= \frac{\text{share holder's funds}}{\text{total Assets}} \\
 &= \frac{5,25,000}{7,50,000} \\
 &= 0.70:1
 \end{aligned}$$

62. Calculate proprietary ratio form the following:

Equity share capital	4,50,000
10% preference share capital	3,20,000
Reserve and surplus	65,000
Creditors	1,10,000
9% Debentures	3,00,000
Property, plant and equipment	7,00,000
Trade investment	2,45,000
Current Assets	3,00,000

Solution:

Share holder's funds = equity share capital + 10% preference share
Capital + reserve & surplus

$$\begin{aligned}
 &= 7,00,000 + 2,45,000 + 3,00,000 \\
 &= 12,45,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Property Ratio} &= \frac{\text{share holder's funds}}{\text{total Assets}} \\
 &= \frac{8,35,000}{12,45,000}
 \end{aligned}$$

$$= 0.67:1$$

- 63.** Calculate proprietary ratio, if total assets to debt ratio is 2:1. Debt is 5,00,000. Equity shares capital is 0.5 times of debt. Preference share capital is 25% of equity share capital. Net profit before tax is 10,00,000 and rate of tax is 40%.

Solution:

Total Assets to Debt Ratio = 2:1

Debt = 5,00,000

$$\text{Total Assets to Debt ratio} = \frac{\text{Total Assets}}{\text{Debt}}$$

$$= \frac{\text{Total Assets}}{5,00,000}$$

$$\text{Total Assets} = 10,00,000$$

$$\text{Equity share capital} = 0.5 \times 5,00,000$$

$$= 2,50,000$$

$$\text{Preference share capital} = 25\% \text{ of equity share capital}$$

$$= \frac{25}{100} \times 2,50,000$$

$$= 62,500$$

$$\text{Net profit before tax} = 10,00,000$$

$$\text{Tax ratio} = 40\%$$

$$\text{Profit after tax} = 10,00,000 - 40/100 \times 10,00,000$$

$$= 10,00,000 - 4,00,000$$

$$= 6,00,000$$

Share holder's funds = equity share capital + preference share
Capital + profit

$$= 2,50,000 + 62,500 + 6,00,000$$

$$= 9,12,500$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}}$$

$$= \frac{9,12,500}{10,00,000}$$

$$= 0.9125:1$$

64. State, with reasons, whether the proprietary ratio will improve, decline or will not change because of the following transactions if proprietary ratio is 0.8:1:

- I. Obtained a loan of 5,00,000 from state bank of India payable after five years.
- II. Purchased machinery of 2,00,000 by cheque.
- III. Redeemed 7% Redeemable preference shares 3,00,000.
- IV. Issued equity shares to the vendor of building purchased for 7,00,000.
- V. Redeemed 10% redeemable debentures of 6,00,000.

65. Form the following information, calculate:

- a) Proprietay ratio:
- b) Debt to Equity Ratio; and
- c) Total Assets to Debt Ratio.

Current Assets 40,00,000

Long-term borrowings	15,00,000
Non-current Assets	40,00,000
Current Liabilities	20,00,000
Long-term provisions	25,0,000

Solutions:

Total Assets = Non-current Assets + Current Assets

$$= 40,00,000 + 4,00,000$$

$$= 80,00,000$$

Debt = long term borrowings + Long term provisions

$$= 15,00,000 + 25,00,000$$

$$= 40,00,000$$

Total Assets = Equity + Non-Current liabilities + Current Liabilities

$$8,00,000 = \text{Equity} + 40,00,000 + 20,00,000$$

$$\text{Equity} = 20,00,000$$

$$\text{1. Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}}$$

$$= \frac{20,00,000}{80,00,000}$$

$$= 0.25:1$$

$$\text{2. Debt to equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$= \frac{40,00,000}{20,00,000}$$

$$= 2:1$$

$$\begin{aligned}
 \text{3. Total Assets to Debt Ratio} &= \frac{\text{Debt}}{\text{Equity}} \\
 &= \frac{80,00,000}{40,00,000} \\
 &= 2:1
 \end{aligned}$$

66. From the following information, calculate:

- a) Proprietary Ratio:
- b) Debt to Equity Ratio; and
- c) Total Assets to Debt Ratio.

Total Debt	18,00,000
Capital Employed	15,00,000
Current Assets	7,50,000
Working capital	1,50,000

Solution:

Working capital = Current Assets – Current Liabilities

$$15,000 = 7,50,000 - \text{Current Liabilities}$$

$$\text{Current Liabilities} = 6,00,000$$

Total Debt = Non-Current Liabilities (Debt) + Current Liabilities

$$18,00,000 = \text{Non-Current Liabilities (Debt)} + 6,00,000$$

Non-Current Liabilities (Debt) = 12,00,000

Shareholder's funds = capital Employed – non- Current Liabilities

$$= 15,00,000 - 12,00,000$$

$$= 3,00,000$$

Total Assets = Capital Employed + Current Liabilities

$$= 15,00,000 + 6,00,000$$

$$= 21,00,000$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}} \times 100$$

$$= \frac{30,00,000}{21,00,000} \times 100$$

$$= 14.29\%$$

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

$$= \frac{12,00,000}{3,00,000}$$

$$= 4:1$$

$$\text{Total Assets to Debt Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$= \frac{12,00,000}{3,00,000}$$

$$= 4:1$$

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

$$= \frac{21,00,000}{12,00,000}$$

$$= 1.75 : 1$$

67. If net profit before interest and tax is 10,00,000 and interest on long-term funds is 2,00,000, find interest coverage Ratio.

Solution:

$$\begin{aligned}\text{Interest charge Ratio} &= \frac{\text{Profit before interest \& tax}}{\text{Interest on long term loans}} \\ &= \frac{10,00,000}{2,00,000} \\ &= 5 \text{ times}\end{aligned}$$

- 68.** From the following information, calculate interest coverage Ratio: Net profit after Tax 4,25,000; tax 75,000; interest on long-term funds 1,25,000.

Solution:

$$\begin{aligned}\text{Net profit before interest and tax} &= \text{Net profit After tax} + \text{tax} + \text{Interest} \\ &= 4,25,000 + 75,000 + 1,25,000 \\ &= 6,25,000\end{aligned}$$

$$\begin{aligned}\text{Interest charge Ratio} &= \frac{\text{Profit before interest \& tax}}{\text{Interest on long term loans}} \\ &= \frac{6,25,000}{1,25,000} \\ &= 5 \text{ times}\end{aligned}$$

- 69.** From the following details, calculate interest coverage Ratio:

Net profit after tax	7,00,000
6% Debentures	20,00,000
Tax rate 30%	

Solution:

Let the profit before tax be ₹ x

Net profit after tax = Net profit before tax – tax

$$7,00,000 = x - \frac{30}{100}x - \frac{30}{100}x$$

$$\frac{70x}{100} = 7,00,000$$

$$x = \frac{70 \times 100}{70}$$

Net profit before tax = 10,00,000

Interest on debentures = 6% of Debentures

$$= 1,20,000$$

Profit before interest and tax = profit before tax + interest

$$= 10,00,000 + 1,20,000$$

$$= 11,20,000$$

Interest charge Ratio = $\frac{\text{profit before interest \& tax}}{\text{interest on long term loans}}$

$$= \frac{11,20,000}{1,20,000}$$

$$= 9.33 \text{ times}$$

70. From the following information, calculate interest coverage ratio:

Net profit after interest and tax 1,20,000; rate of income tax; 40%;
15% debentures 1,00,000 12% mortgage loan 1,00,000.

Solution:

Let tax before tax be x

Profit after tax = profit before tax – interest

$$1,20,000 = x - 40/100 x$$

$$\frac{60}{100} x = 1,20,000$$

$$x = \frac{1,20,000 \times 100}{60}$$

profit before tax = 2,00,000

interest = 15% debentures + 12% mortgage loan

$$= \frac{15}{100} \times 1,00,000 + \frac{12}{100} \times 1,00,000$$

$$= 15,000 + 12,000$$

$$= 27,000$$

Profit before interest and tax = profit before tax + interest

$$= 2,00,000 + 27,000$$

$$= 22,7,000$$

Interest charge Ratio = $\frac{\text{profit before interest \& tax}}{\text{interest on long term loans}}$

$$= \frac{22,7,000}{27,000}$$

$$= 8.41 \text{ times}$$

71. From the following information, calculate interest coverage ratio:

10,000 equity shares of 10 each	1,00,000
8% preference shares	70,000
10% debentures	50,000
Long-term loans from bank	50,000

Interest on long-term loans from bank	5,000
Net profit after tax	75,000
Tax	9,000

Solution:

Net profit before tax = net profit after tax + tax = interest on long term loan term bank + interest on debentures

$$= 5,000 + 5,000$$

$$\text{Interest} = 10,000$$

$$\text{Interest} = 10,000$$

$$\text{Interest coverage ratio} = \frac{\text{porifit before interest \& tax}}{\text{interest on long term loans}}$$

$$= \frac{94,000}{10,000}$$

$$= 9.4 \text{ times}$$

72. From the following information, calculate Debt to capital employed ratio:

Shareholder's funds	24,00,000
Long-term borrowings (9% debentures)	12,00,000
Current liabilities	2,00,000
Non-current Assets	28,00,000
Current Assets	10,00,000

Solution:

$$\begin{aligned} \text{Long term Debt} &= \text{long term borrowings (9\% debentures)} \\ &= 12,00,000 \end{aligned}$$

$$\text{Capital employed} = \text{share holder's funds} + \text{long term borrowings}$$

(9% debentures)

$$= 24,00,000 + 12,00,000$$

$$= 36,00,000$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{12,00,000}{36,00,000}$$

$$= 0.33:1$$

73. From the following, calculation Debt to capital employed Ratio:

Capital employed	87,00,000
Investments	4,80,000
Machinery	14,00,000
Trade receivables	8,00,000
Cash and cash equivalents	7,20,000
Equity share capital	45,00,000
8% Debentures	36,00,000
Capital reserve	6,80,000

Solution:

Long term Debts = 8% Debentures

$$= 36,00,000$$

Capital employed = 87,00,000

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{36,00,000}{87,00,000}$$

$$= 0.41:1$$

74. From the following, calculate 'Debt to capital Employed Ratio':

9% Debentures	2,00,000
8% public Deposits	5,00,000
Long-term provisions	2,00,000
Equity share capital	8,00,000
Reserve and surplus	5,00,000

Solution:

Long-term Debts = 9% Debentures + long term Provisions + 8%
Public deposits

$$= 2,00,000 + 2,00,000 + 5,00,000$$

$$= 9,00,000$$

Capital employed = equity share capital + reserve and surplus + 9%
Debentures + long-term provisions + 8% public
Deposits

$$= 8,00,000 + 5,00,000 + 2,00,000 + 2,00,000 + 5,00,000$$

$$= 22,00,000$$

Debt to capital employed ratio = $\frac{\text{long term debt}}{\text{capital employed}}$

$$= \frac{9,00,000}{22,00,000}$$

$$= 0.409:1$$

$$= 0.41:1$$

75. Calculate debt to capital employed ratio from the following information:

Shareholder's funds	50,00,000
Non-current liabilities;	
Long-term borrowings	20,00,000

Long-term provisions	17,50,000	37,50,000
Non-current Assets:		
Property, plant and equipment		
And intangible Assets	90,00,000	
Non-current investment	12,50,000	1,02,50,000
Current Assets		23,75,000

Solution:

$$\begin{aligned}
 \text{Long term Debts} &= \text{Long term Borrowings} + \text{long term provisions} \\
 &= 20,00,000 + 17,50,000 \\
 &= 37,50,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Capital employed} &= \text{share holder's funds} + \text{long term borrowings} + \\
 &\quad \text{Long terms provisions} \\
 &= 50,00,000 + 20,00,000 + 17,50,000
 \end{aligned}$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{37,50,000}{87,50,000}$$

$$= 0.4285$$

$$= 0.43:1$$

76. Calculation debt to capital employed ratio from the following information:

Total debts 60,00,000; current Assets 25,00,000; non-current Assets 95,00,000; working capital 5,00,000.

Solution;

$$\text{Working capital} = \text{current Assets} - \text{current liabilities}$$

$$\begin{aligned}
5,00,000 &= 25,00,000 - \text{current liabilities} \\
\text{Current liabilities} &= 20,00,000 \\
\text{Long term debts} &= \text{total debts} - \text{current liabilities} \\
&= 60,00,000 - 20,00,000 \\
&= 40,00,000 \\
\text{Capital employed} &= \text{current Assets} + \text{non-current Assets} \\
&\quad - \text{Current liabilities} \\
&= 25,00,000 + 95,00,000 - 20,00,000 \\
&= 10,00,000
\end{aligned}$$

$$\begin{aligned}
\text{Debt to capital employed ratio} &= \frac{\text{long term debt}}{\text{capital employed}} \\
&= \frac{40,00,000}{10,00,000} \\
&= 0.40:1
\end{aligned}$$

- 77.** From the following calculate debt to capital employed Ratio:
 10% preference share capital 5,00,000; Equity share capital 15,00,000; securities premium 1,00,000; reserve and surplus 2,00,000; 9% loan from IDBI 30,00,000.

Solution;

$$\begin{aligned}
\text{Long term Debt} &= 9\% \text{ loan form IDBI} \\
&= 30,00,000
\end{aligned}$$

$$\begin{aligned}
\text{Capital employed} &= 10\% \text{ preference share capital} + \text{Equity share} \\
&\quad \text{Capital} + \text{reserves \& surplus} + 9\% \text{ loan from IDBI} \\
&= 5,00,000 + 15,00,000 + 2,00,000 + 30,00,000 \\
&= 52,00,000
\end{aligned}$$

$$\begin{aligned}
\text{Debt to capital employed ratio} &= \frac{\text{long term debt}}{\text{capital employed}} \\
&= \frac{30,00,000}{52,00,000} \\
&= 0.58:1
\end{aligned}$$

78. From the following balance sheet of varun Ltd. as at 31st March, 2023, calculate debt to capital employed ratio:

Particulars	Note No.	
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share capital		
(i) Equity share capital	5,00,000	
(ii) 10% preference share capital	<u>5,00,000</u>	10,00,000
(b) Reserve and surplus		2,40,000
2. Non-Current Liabilities		
Long-term Borrowings (Debentures)		2,50,000
3. Current Liabilities		
(a) Trade payables		4,30,000
(b) Other current liabilities		20,000
(c) Short-term provisions: for Tax		3,00,000
Total		22,40,000
II. ASSETS		
1. Non-current Assets		
Property, Plant and Equipment and intangible Assets:		
(i) property, plant and equipment		6,40,000
(ii) Intangible Assets		1,00,000
2. Current Assets		
(a) Inventories		7,50,000
(b) Trade Receivables		6,40,000
(c) Cash and Cash Equivalent		1,10,000

Total		22,40,000
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Solution:

Long term debt = long term borrowings

$$= 15,00,000$$

**Capital employed = share capital + reserve & surplus +
long term borrowings**

$$= 20,00,000 + 11,00,000 + 15,00,000$$

$$= 46,00,000$$

Debt to capital employed ratio = $\frac{\text{long term debt}}{\text{capital employed}}$

$$= \frac{15,00,000}{46,00,000}$$

$$= 0.33:1$$

79. Debt to capital employed ratio of a company is 0.4:1. State giving reasons, which of the following will improve, reduce not change the ratio?

- I. Sale of machinery at a loss of 50,000.
- II. Purchase of stock-in-trade on credit of two months for 80,000.
- III. Conversion of debentures into equity shares of 5,00,000.
- IV. Purchase of fixed assets for 4,00,000 on a long-term deferred payment basis.

Solution:

80. From the following details, calculate inventory turnover ratio:

Cost of revenue from operations (cost of Goods sold) 9,00,000

Inventory in the beginning of the year 2,50,000

Inventory at the close of the year

3,50,000

Solution:

Cost of goods sold = 9,00,000

Average inventory = $\frac{\text{opening inventory} + \text{closing inventory}}{2}$
= $\frac{2,50,000 + 3,50,000}{2}$
= 3,00,000

Inventory turnover ratio = $\frac{\text{cost of goods sold}}{\text{avg inventory}}$
= $\frac{9,00,000}{3,00,000}$
= 3 times

81. Cost of revenue from operations (cost of goods sold) 5,00,000:
purchases 5,50,000; opening inventory 1,00,000.

Calculate inventory turnover ratio.

Solution:

Cost of goods sold = opening inventory + purchase – purchased return
– closing inventory

5,00,000 = 1,00,000 + 5,50,000 – 0 – closing inventory

Closing inventory = 1,50,000

Cost of goods sold = 5,00,000

Avg. inventory = $\frac{\text{opening inventory} + \text{closing inventory}}{2}$
= $\frac{1,00,000 + 1,50,000}{2}$
= 1,25,000

Inventory turnover ratio = $\frac{\text{cost of goods sold}}{\text{avg inventory}}$
= $\frac{5,00,000}{1,25,000}$
= 4 times

82. Calculation inventory turnover ratio from the following information:

Opening inventory is 50,000; purchase 3,90,000; revenue from operations, i.e., net sales 6,00,000; gross profit ratio 30%.

Solution:

Gross profit ratio = 30% of net sales

$$= \frac{30}{100} \times 6,00,000$$

$$= 1,80,000$$

Cost profit = net sales – cost of goods sold

$$1,80,000 = 6,00,000 - \text{cost of goods sold}$$

$$\text{Cost of goods sold} = 4,20,000$$

Cost of goods sold = opening inventory + purchases – purchase return
+ direct expenses – closing inventory

$$4,20,000 = 50,000 + 3,90,000 - 0 + 0 - \text{closing inventory}$$

$$\text{Closing inventory} = 20,000$$

$$\text{Avg. inventory} = \frac{\text{opening inventory} + \text{closing inventory}}{2}$$

$$= \frac{50,000 + 20,000}{2}$$

$$= 35,000$$

$$\text{Inventory turnover ratio} = \frac{\text{cost of goods sold}}{\text{avg inventory}}$$

$$= \frac{4,20,000}{35,000}$$

$$= 12 \text{ times}$$

83. From the following information, calculate inventory turnover ratio:

Opening inventory 2,00,000

Purchase 4,60,000

Carriage inwards	20,000
Closing inventory	60,000
Wages	30,000
Freight outwards	37,500

Solution:

$$\begin{aligned}
 \text{Cost of goods sold} &= \text{opening inventory} + \text{purchases} + \text{carriage inwards} \\
 &\quad + \text{wages} - \text{closing inventory} \\
 &= 2,00,000 + 4,60,000 + 20,000 + 30,000 - 60,000 \\
 &= 6,50,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Avg. inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\
 &= \frac{2,00,000 + 60,000}{2} \\
 &= 1,30,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\
 &= \frac{6,50,000}{1,30,000} \\
 &= 5 \text{ times}
 \end{aligned}$$

84. Calculate inventory turnover ratio from the following:

Opening inventory	58,000	
Closing inventory	62,000	
Revenue from operation, i.e., net sales	6,40,000	
Gross profit ratio	25%	

Solution:

$$\begin{aligned}
 \text{Gross profit} &= 25\% \text{ of net sales} \\
 &= \frac{25}{100} \times 6,40,000 \\
 &= 1,60,000
 \end{aligned}$$

$$\text{Gross profit} = \text{net sales} - \text{cost of goods sold}$$

Cost of goods sold = 4,80,000

$$\begin{aligned} \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{4,80,000}{60,000} \\ &= \mathbf{8 \text{ times}} \end{aligned}$$

Revenue form operations	16,00,000
Average inventory	2,20,000
Gross loss Ratio 5%.	

Gross loss = 5% of revenue from operation

Gross loss = cost of goods sold – revenue from operation

80,000 = cost of goods sold – 16,00,000

Cost of goods sold = 16,80,000

$$\begin{aligned} \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{16,80,000}{2,20,000} \\ &= 7.64 \text{ times} \end{aligned}$$

- 86.** Revenue from operations 4,00,000; gross 1,00,000; closing inventory 1,20,000; excess of closing inventory over inventory 40,000. Calculate inventory turnover Ratio.

Solution;

Revenue from operation = 4,00,000

Opening inventory = 1,20,000 – 40,000
= 80,000

Gross profit = revenue from operation – cost of goods sold

1,00,000 = 4,00,000 – cost of goods sold

Cost of goods sold = 3,00,000

$$\begin{aligned}\text{Avg. inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\ &= \frac{1,20,000 + 80,000}{2} \\ &= 1,00,000\end{aligned}$$

$$\begin{aligned}\text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{3,00,000}{1,00,000} \\ &= 3 \text{ times}\end{aligned}$$

- 87.** From the following data, calculate turnover Ratio:

Total sales 1,00,000; sales return 1,00,000; gross profit 1,80,000; closing inventory 2,00,000; excess of closing inventory over opening inventory 40,000.

Solution:

Net sales = gross sales – sales return

= 10,00,000 – 1,00,000

= 9,00,000

Revenue from operation = 9,00,000

Opening inventory = 2,00,000 – 40,000

$$= 1,60,000$$

Gross profit = revenue from operation – cost of goods sold

$$1,80,000 = 9,00,000 - \text{cost of goods sold}$$

$$\text{Cost of goods sold} = 7,20,000$$

$$\text{Avg. inventory} = \frac{\text{opening inventory} + \text{closing inventory}}{2}$$

$$= \frac{1,60,000 + 2,00,000}{2}$$

$$= 1,80,000$$

$$\text{Inventory turnover ratio} = \frac{\text{cost of goods sold}}{\text{avg inventory}}$$

$$= \frac{7,20,000}{1,80,000}$$

$$= 4 \text{ times}$$

- 88.** ₹ 2,00,000 is the cost of revenue from operations (cost of good sold), during the year. If inventory turnover Ratio is 8 times, calculate inventories at the end of the year. Inventory at the end is 1.5 times that of in the beginning.

Solution:

$$\begin{aligned} \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{2,00,000}{\frac{\text{opening inventory} + \text{closing inventory}}{2}} \end{aligned}$$

$$8 = \frac{2,00,000 \times 2}{n + 1.5x}$$

$$8 (2.5 \times 0) = 4,00,000$$

$$X = \frac{4,00,000}{2.5 \times 8}$$

$$\text{Opening inventory} = 20,000 \times 1.5$$

$$\text{Closing inventory} = 20,000 \times 1.5$$

$$= 30,000$$

- 89.** From the following information obtained from the books of Kundan Ltd. calculate the inventory turnover Ratio for the years 2015-16 and 2016-17:

Particular	2015-16 ₹	2016-17 ₹
Inventory on 31 st March	7,00,000	17,00,000
Revenue from operations (gross profit is 25% on cost of revenue from operation)	50,00,000	75,00,000

In the year 2015-16, inventory by 2,00,000.

Solution:

2015-16

Opening inventory = 5,00,000

Closing inventory = 7,00,000

Gross profit = revenue from operation – cost of goods sold

$$\frac{25}{100} \text{ logs} = 50,00,000 - \text{logs}$$

$$\left(\frac{25}{100} + 1\right) \text{ logs} = 50,00,000$$

$$\text{Logs} = 50,00,000 \times \frac{100}{125}$$

Cost of goods sold = 40,00,000

$$\begin{aligned} \text{Avg. inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\ &= \frac{5,00,000 + 7,00,000}{2} \\ &= 6,00,000 \end{aligned}$$

$$\begin{aligned} \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{40,00,000}{6,00,000} = 6.666 \end{aligned}$$

$$= 6.67 \text{ times}$$

2016-17

$$\text{Opening inventory} = 7,00,000$$

$$\text{Closing inventory} = 17,00,000$$

$$\begin{aligned} \text{Average inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\ &= \frac{7,00,000 + 17,00,000}{2} \\ &= 12,00,000 \end{aligned}$$

$$\text{Gross profit} = \text{revenue from operation} - \text{cost of goods Sold}$$

$$\frac{25}{100} \text{ logs} = 75,00,000 - \text{logs}$$

$$\left(\frac{25}{100} + 1\right) \text{ logs} = 75,00,000$$

$$\text{Logs} = 75,00,000 \times \frac{100}{125}$$

$$\text{cost of goods sold} = 60,00,000$$

$$\begin{aligned} \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{60,00,000}{12,00,000} \\ &= 5 \text{ times} \end{aligned}$$

90. Calculate inventory turnover ratio from following information:

Opening inventory 40,000; purchases 3,20,000; and closing inventory 1,20,000 state, giving reason, which of the following transactions would (i) increase, (ii) decrease, (iii) neither increase nor decrease the inventory turnover Ratio:

a) Sale of goods for 40,000 (cost 32,000).

- b) Increase in the value of closing inventory by 40,000.
- c) Goods purchased for 80,000.
- d) Purchase return 20,000.
- e) Goods costing 10,000 withdrawn for personal use.
- f) Goods costing 20,000 distributed as free samples.

91. Following figures have been extracted from Shivalika Mills Ltd.

Inventory in the beginning of the year 60,000.

Inventory at the end of the year 1,00,000.

Inventory turnover Ratio 8 times.

Selling price 25% above cost.

Compute amount of Gross Profit and Revenue from operations (Net sales).

Solution:

$$\begin{aligned}
 \text{Avg. inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\
 &= \frac{60,000 + 1,00,000}{2} \\
 &= 80,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Inventory turnover ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\
 8 &= \frac{\text{cost of goods sold}}{80,000}
 \end{aligned}$$

$$\text{cost of goods sold} = 6,40,000$$

$$\text{Selling price} = 25\% \text{ above cost}$$

$$\begin{aligned}
 \text{Revenue from operation} &= 6,40,000 + 25\% / 100 \times 6,40,000 \\
 &= 6,40,000 + 1,60,000 \\
 &= 8,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Gross profit} &= \text{revenue from operation} - \text{cost of goods sold} \\
 &= 8,00,000 - 6,40,000 \\
 &= 1,60,000
 \end{aligned}$$

92. From the following information, calculate inventory turnover Ratio:

Credit revenue from operations 6,00,000; cash revenue from operations 2,00,000 gross profit 25% of cost, closing was 3 times the opening inventory. Opening inventory was 10% of cost of revenue from operations.

Solution:

$$\begin{aligned}\text{Net revenue from operation} &= \text{credit revenue from operation} + \\ &\quad \text{Cash revenue from operation} \\ &= 6,00,000 + 2,00,000 \\ &= 8,00,000\end{aligned}$$

Let the cost of goods sold be x

Gross profit = net revenue from operations – cost of goods sold

$$\begin{aligned}\frac{25}{100} x &= \text{net revenue from operation} - x \\ (1 + 25/100) x &= 8,00,000 \\ x &= 8,00,000 \times 100/125\end{aligned}$$

cost of revenue from operations = 6,40,000

opening inventory = 10% of cost of revenue from operations

$$\begin{aligned}&= \frac{10}{100} \times 6,40,000 \\ &= 64,000\end{aligned}$$

Closing inventory = 3 x 64,000 = 1,92,000

$$\begin{aligned}\text{Avg. inventory} &= \frac{\text{opening inventory} + \text{closing inventory}}{2} \\ &= \frac{64,000 + 1,92,000}{2} \\ &= 1,28,000\end{aligned}$$

$$\text{Inventory turnover ratio} = \frac{\text{cost of goods sold}}{\text{avg inventory}}$$

$$\begin{aligned}
 &= \frac{6,40,000}{1,28,000} \\
 &= 5 \text{ times}
 \end{aligned}$$

93. From the following information, calculation value of opening inventory:

Closing inventory 68,000

Total sales 4,80,000 (including cash sales 1,20,000)

Total purchases 3,60,000 (including credit purchases 2,39,200)

Goods are sold at a profit of 25% on cost.

Solution:

Gross profit = revenue from operation – cost of goods sold

$$\frac{25}{100} \times 4,80,000 = 4,80,000 - x$$

$$\left(\frac{25}{100} + 1\right) \times 4,80,000 = 4,80,000$$

$$\begin{aligned}
 \text{Cost of goods sold} &= 4,80,000 \times \frac{100}{125} \\
 &= 3,84,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Cost of goods sold} &= \text{opening inventory} + \text{purchase} - \text{closing inventory} \\
 3,84,000 &= \text{opening inventory} + 3,60,000 - 68,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Opening inventory} &= 3,84,000 - 3,60,000 + 68,000 \\
 &= 92,000
 \end{aligned}$$

94. From the following information, determine opening and closing inventories:

Inventory turnover Ratio 5 times, total sales 2,00,000, gross profit Ratio 25%. Closing inventory is more y 4,000 than the opening inventory.

Solution:

Gross profit = 25% of sales

$$\begin{aligned} &= \frac{25}{100} \times 2,00,000 \\ &= 50,000 \end{aligned}$$

Gross profit = revenue from operation – cost of goods sold

$$50,000 = 2,00,000 - \text{cost of goods sold}$$

Cost of goods sold = 1,50,000

Let the opening inventory be x

Closing inventory = x + 4,000

$$\begin{aligned} \text{Inventory turnover Ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\ &= \frac{1,50,000}{\frac{x + x + 4,000}{2}} \end{aligned}$$

$$5 (2x + 4,000) = 1,50,000 \times 2$$

$$10x + 20,000 = 3,00,000$$

$$x = \frac{3,00,000 - 20,000}{10}$$

$$\text{Opening inventory} = 28,000$$

$$\begin{aligned} \text{Closing inventory} &= 28,000 + 4,000 \\ &= 32,000 \end{aligned}$$

95. Inventory turnover Ratio 5 times; cost of Revenue from operations (cost of goods sold) 18,90,000. Calculate opening inventory and closing inventory if inventory at the end is 2.5 times more than that in the beginning.

Solution:

Let the opening inventory be x

Closing inventory = x + 2.5 x = 3.5 x

$$\text{Inventory turnover Ratio} = \frac{\text{cost of goods sold}}{\text{avg inventory}}$$

$$\begin{aligned}
 5 &= \frac{1,50,000}{\frac{x+X+4,000}{2}} \\
 5 (4.5 x) &= 18,90,000 \times 2 \\
 X &= \frac{18,90,000 - 25}{5 \times 4.5}
 \end{aligned}$$

Opening inventory = 16,80,000

Closing inventory = 16,80,000 x 3.5
= 5,88,000

96. 3,00,000 is the cost of Revenue from operations (cost of goods sold). Inventory Ratio 8 times; inventory in the beginning is 2 times more than the inventory at the end. Calculate value of opening and closing inventories.

Solution:

Let the closing inventory be x

Opening inventory = x + 2x = 3x

$$\begin{aligned}
 \text{Inventory turnover Ratio} &= \frac{\text{cost of goods sold}}{\text{avg inventory}} \\
 &= \frac{3,00,000}{\frac{3x+X}{2}} \\
 8 (4x) &= 3,00,000 \times 2 \\
 X &= \frac{3,00,000 - 2}{8 \times 4}
 \end{aligned}$$

Opening inventory = 18,750

Closing inventory = 18,700 + 3
= 56,250

97. Credit revenue from operations, i.e., Net credit sale for the year

Debtors 12,00,000

Bills Receivable 1,20,000

Calculate Trade receivables turnover Ratio 80,000

Calculate Trade Receivables Turnover Ratio.

Solution:

Avg. trade receivables = 1,20,000 + 80,000

$$\begin{aligned}\text{Trade receivable turnover Ratio} &= \frac{\text{credit Revenue from operation}}{\text{Average Trade Receivables}} \\ &= \frac{12,00,000}{2,00,000} \\ &= 6 \text{ times}\end{aligned}$$

98. Calculate trade receivables turnover Ratio from the following information:

	Opening Balance	closing Balance
Sundry debtors	28,00,000	25,000
Bills Receivables	7,000	15,000
Provision for doubtful debts	1,500	4,500

Total sales 1,00,000; sales return 1,5000; cash sales 23,5000.

Solution:

$$\begin{aligned}\text{Avg. Trade Receivable} &= \frac{\text{op.debtor} + \text{cl.deboters}}{2} + \frac{\text{op.T/R} + \text{Cl.T/R}}{2} \\ &= \frac{28,000 + 25,000}{2} + \frac{7,000 + 15,000}{2} \\ &= 26,500 + 11,000 \\ &= 37,500\end{aligned}$$

$$\begin{aligned}\text{Net credit sales} &= 1,00,000 - 1500 - 23,500 \\ &= 75,000\end{aligned}$$

$$\begin{aligned}\text{Trade receivable turnover Ratio} &= \frac{\text{credit Revenue from operation}}{\text{Average Trade Receivables}} \\ &= \frac{75,000}{37,500} \\ &= 2 \text{ times}\end{aligned}$$

99. Closing Trade receivables 90,000 revenue from operation 7,20,000, cash revenue from operations 1,80,000. Provision for doubtful debts 8,000. Calculate Trade receivables turnover Ratio.

Solution:

Avg. Trade Receivable = 90,000

Credit revenue from operations = 7,20,000 – 1,80,000

$$= 5,40,000$$

Inventory turnover Ratio = $\frac{\text{credit Revenue from operation}}{\text{Average Trade Receivables}}$

$$= \frac{5,40,000}{90,000}$$

$$= 6 \text{ times}$$

- 100.** Closing Trade Receivables 1,00,000; cash sales being 25% of credit sales; Excess of closing Trade Receivables over opening Trade Receivables 40,000; revenue from operations, i.e., net sales 6,00,000. Calculate trade receivable turnover Ratio.

Solution:

Closing Trade receivable = 1,00,000

Opening Trade receivable = 60,000

Net sales = cash sales + credit sales

$$6,00,000 = \frac{25}{100} x + x$$

$$\frac{25x}{100} = 6,00,000$$

$$\text{Credit sales} = \frac{6,00,000 \times 100}{125}$$

Credit + sales = 4,80,000

Inventory receivable turnover Ratio = $\frac{\text{net credit+sales}}{\text{avg Trade receivable}}$

$$5 = \frac{4,80,000}{\frac{60,000 + 1,00,000}{2}}$$

$$= \frac{4,80,000 \times 2}{1,60,000}$$

$$= 6 \text{ times}$$

- 101.** compute Trade receivables turnover Ratio from the following:

	31st March, 2022	31st March, 2023
Revenue from operations (Net sales)	8,00,000	7,00,000
Debtors in the beginning of year	83,000	1,17,000
Debtors at the end of year	1,17,000	83,000
Sales Return	1,00,000	50,000

solution:

2021

$$\begin{aligned}
 \text{Avg. Trade Receivable} &= \frac{\text{Opening Debtors} + \text{Closing Debtors}}{2} \\
 &= \frac{83,000 + 1,17,000}{2} \\
 &= 1,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Trade Receivable Turnover Ratio} &= \frac{\text{Credit Revenue from operation}}{\text{Avg. Trade Receivable}} \\
 &= \frac{8,00,000}{1,00,000} \\
 &= 8 \text{ Times}
 \end{aligned}$$

2022

$$\begin{aligned}
 \text{Avg. Trade Receivable} &= \frac{\text{Opening Debtors} + \text{Closing Debtors}}{2} \\
 &= \frac{1,17,000 + 83,000}{2} \\
 &= 1,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Trade Receivable Turnover Ratio} &= \frac{\text{Credit Revenue from operation}}{\text{Avg.Trade Recivable}} \\
 &= \frac{7,00,000}{1,00,000} \\
 &= 7 \text{ Times}
 \end{aligned}$$

102. Closing Trade Receivables 1,20,000, Revenue from operations 14,40,000. provision for Doubtful Debtd 20,000. Calculate trade receivables Ratio.

solution:

$$\begin{aligned}
 \text{Trade Receivable Turnover Ratio} &= \frac{\text{Credit Revenue from operation}}{\text{Avg.Trade Recivable}} \\
 &= \frac{14,40,000}{1,20,000} \\
 &= 12 \text{ Times}
 \end{aligned}$$

103. Closing Trade Receivables 4,00,000; Cash sales being 25% of credit sales; Excess of closing Trade Receivables over opening Trade Receivables 2,00,000; Revenue from operations, i.e., Net sales 15,00,000. Calculate Trade Receivables Turn over Ratio.

Solution:

Closing Trade Receivable = 4,00,000

Opening Trade Receivable = 4,00,000 - 2,00,000

= 2,00,000

Net Revenue from operation = Cash sales + Credit + Sales

$$15,00,000 = \frac{25x}{100} + x$$

Closing Trade Receivable = 4,00,000

Opening Trade Receivable = 4,00,000 - 2,00,000

$$= 2,00,000$$

Net sales = Cash sales + Credit + Sales

$$15,00,000 = \frac{25x}{100} + x$$

$$x = \frac{15,00,000 \times 100}{125}$$

credit sales = 12,00,000

Trade Receivable Turnover Ratio = $\frac{\text{Credit Revenue from operation}}{\text{Avg. Trade Recivable}}$

$$= \frac{12,00,000}{\frac{2,00,000 + 4,000}{2}}$$

$$= \frac{12,00,000 \times 2}{6,00,000}$$

$$= 4 \text{ Times}$$

104. A firm normally has Trade Receivables equal to two months credit sales. During the coming year it expects credit sales of

7,20,000 spread evenly over the year (12 months). What is estimated amount of Trade Receivables at the end of the year?

Solution:

Closing Trade Receivable = Two months credit sales

$$\begin{aligned} &= \frac{7,20,000}{12} \times 2 \\ &= 1,20,000 \end{aligned}$$

105. Mercury Ltd. made credit sales of 4,00,000 during the financial period. If the collection period is 36 days and year is assumed to be 360 days, calculate:

- I. Trade Receivables Turnover Ratio;
- II. Average Trade Receivables;
- III. Trade Receivables at the end when Receivables at the end are more than in the beginning by 6,000.

Solution:

$$\begin{aligned} \text{Debt Collection period} &= \frac{\text{Number of Days}}{\text{Trade Receivable Turnover Ratio}} \\ 36 &= \frac{360}{\text{Trade Receivable Turnover Ratio}} \end{aligned}$$

$$\begin{aligned} \text{Trade Receivable Turnover Ratio} &= \frac{\text{Net Credit Sales}}{\text{Avg.Trade Recivable}} \\ 10 &= \frac{4,00,000}{\text{Avg.Trade Recivable}} \end{aligned}$$

$$\text{Avg. Trade Receivables} = 40,000$$

Let the opening trade receivable be x

$$\text{closing Trade receivable} = x + 6,000$$

$$\text{Avg. Trade Receivable} = \frac{\text{op. T/R} + \text{cl. T/R}}{2}$$

$$40,000 = \frac{x + (x+6,000)}{2}$$

$$2x + 6,000 = 80,000$$

$$\text{Opening Inventory} = 37,000$$

$$\text{Closing Inventory} = 43,000$$

106. Calculate Trade Receivables Turnover Ratio in each of the following alternative cases:

Case 1: Net credit sales 4,00,000; Average Trade receivables 1,00,000.

Case 2: Revenue from operations (Net sales) 30,00,000; Cash revenue from operations, i.e., Cash sales 6,00,000; opening trade receivables 2,00,000; closing trade receivables 6,00,000.

Case 3: Cost of revenue from operations or cost of goods sold 3,00,000; Gross profit on cost 25% cash sales 20% of Total sales; opening trade receivables 50,000; closing trade receivables 1,00,000.

Case 4: Cost of Revenue from operations or cost of goods sold 4,50,000; Gross profit on sales 20% cash sales 25% of net credit sales, opening trade receivables 90,000; closing trade receivables 60,000.

Case 1:

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net credit} + \text{Revenue from operation}}{\text{Avg. Trade Receivables}}$$

$$= \frac{4,00,000}{1,00,000}$$

$$= 4 \text{ times}$$

Case 2: Net credit revenue from operation = Net sales - cash sales

$$= 30,00,000 - 6,00,000$$

$$= 24,00,000$$

Avg. Trade Receivable

$$= \frac{\text{op. T/R} + \text{cl. T/R}}{2}$$

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

Average Trade Receivable

$$= 4,00,000$$

Trade Receivable Turnover Ratio

$$= \frac{\text{Net Credit Sales}}{\text{Avg. Trade Receivable}}$$

$$= \frac{24,00,000}{4,00,000}$$

$$= 6 \text{ times}$$

Case 3:

Gross profit = $\frac{25}{100}$ of cost goods sold

$$= \frac{25}{100} \times 3,00,000$$

$$= 75,000$$

Gross profit = Revenue from operation - cost of goods sold

$$75,000 = \text{Revenue from operation} - 3,00,000$$

$$\text{Revenue from operation (Net sales)} = 3,75,000$$

$$\text{Net sales} = \text{Cash Sales} + \text{Credit sales}$$

$$3,75,000 = \frac{20}{100} \times 3,75,000 + \text{Credit sales}$$

$$\text{credit sales} = 3,75,000 - 75,000$$

$$= 3,00,000$$

$$\text{Inventory Turnover Ratio} = \frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Receivable}}$$

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

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

$$= 4 \text{ times}$$

Case 4:

Gross profit = Net Return from operation - cost of goods sold

$$\frac{20}{100} \times x = x - 4,50,000$$

$$\frac{80x}{100} = 4,50,000$$

$$\text{Net revenue from operations} = \frac{4,50,000 \times 100}{80}$$

$$= 5,62,500$$

Net sales = cash sales + credit sales

$$5,62,500 \frac{25}{100} \times + x$$

$$\text{Net credit revenue from operations} = \frac{5,62,500 \times 100}{125}$$

$$= 4,50,000$$

$$\begin{aligned}
 \text{Avg. Trade Receivable} &= \frac{\text{op. T/R} + \text{cl. T/R}}{2} \\
 &= \frac{90,000 + 60,000}{2} \\
 &= 75,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Inventory Turnover Ratio} &= \frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Receivable}} \\
 &= \frac{4,50,000}{75,000} \\
 &= 6 \text{ times}
 \end{aligned}$$

107. From the information given below calculate Trade Receivables Turnover Ratio:

Credit Revenue from operations, i.e., Credit sales 8,00,000; opening Trade Receivables 1,20,000; and closing Trade Receivables 2,00,000.

State, giving reason, which of the following would increase, decrease or not change Trade Receivables Turnover Ratio:

- I. Collection From Trade Receivables 40,000.
- II. Credit Revenue from operations, i.e., credit sales 80,000
- III. Sales Return 20,000
- IV. Credit Purchase 1,60,000.

Solution:

108. 1,75,000 is the Credit revenue from operations, i.e., Net credit of an enterprise. If Trade Receivables Turnover Ratio is 8 times, calculate Trade Receivables in the beginning and at the end of the year. Trade Receivables at the end is 7,000 more than in the beginning.

Solution:

$$\text{Credit revenue from operation} = 1,75,000$$

$$\text{Let the Trade receivable in the begening be} = x$$

$$\text{Closing Trade Receivable} = x + 7,000$$

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net Credit Revenue from operation}}{\text{Avg.Trade Recivable}}$$

$$8 = \frac{1,75,000}{\frac{x+x+7,000}{2}}$$

$$8 = \frac{1,75,000}{2x+7,000}$$

$$8(2x + 7,000) = 1,75,000 \times 2$$

$$2x + 7,000 = \frac{1,75,000 \times 2}{8}$$

$$2x = 43,750 - 7,000$$

$$\text{Opening Trade Receivable (x)} = \frac{36,750}{2} = 18,375$$

$$\text{Closing Trade Receivable} = 18,375 + 7,000 = 25,375$$

109. From the following information, calculation opening and closing Trade Receivables, if Trade Receivables Turnover Ratio is 3 Times.

- I. Cash Revenue from operations is 1/3rd of credit Revenue from operations .
- II. Cost of Revenue from operations is 3,00,000.
- III. Gross profit is 25% of the Revenue from operations.

IV. Trade Receivables at the end are 3 times more than that of the beginning.

Solution:

Gross profit = Net sales - Cost of Goods sold

$$= \frac{25}{100}x = x - 3,00,000$$

$$x - \frac{25x}{100} = 3,00,000$$

$$= \frac{75}{100}x = 3,00,000$$

$$x = \frac{3,00,000 \times 100}{75}$$

Net revenue from operations = 4,00,000

let cash sales be x

Net revenue from operations = cash sales + credit sales

$$4,00,000 = \frac{1}{3}x + x$$

$$= \frac{4x}{3} = 4,00,000$$

$$x = \frac{4,00,000 \times 3}{4}$$

Net credit revenue from operation = 3,00,000

Let the opening trade receivable be x

closing trade receivables = x + 3x

Trade Receivable Turnover Ratio = $\frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Recivable}}$

$$3 = \frac{3,00,000}{\frac{x+4x}{2}}$$

$$3(x + 4x) = 3,00,000 \times 2$$

$$x = \frac{3,00,000 \times 2}{3 \times 5}$$

$$\text{Opening Trade Receivable} = 40,000$$

$$\begin{aligned} \text{Closing Trade Receivable} &= 40,000 \times 4 \\ &= 1,60,000 \end{aligned}$$

110. Cash revenue from operations (cash sales) 2,00,000, cost of Revenue from operations or cost of goods sold 3,50,000; Gross profit 1,50,000; Trade Receivables Turnover Ratio 3 times. Calculate opening and closing Trade Receivables in each of the following alternative cases:

Case 1: If closing Trade Receivables were 1,00,000 in excess of Opening Trade Receivables.

Case 2: If Trade Receivables at the end were 3 times than in the beginning.

Case 3: If Trade Receivables at the end were 3 times more than that of in the beginning.

Solution:

Gross profit = Net sales - Cost of goods sold

1,50,000 = Net sale - 3,50,000

Net sales = 5,00,000

Net sales = Cash sales + Credit sales

5,00,000 = 2,00,000 + Credit sales

Net credit revenue from operation = 3,00,000

(Net credit sales)

Case : 1

Opening Trade Receivable = x

Closing Trade Receivable = x + 1,00,000

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Recivable}}$$

$$3 = \frac{3,00,000}{\frac{x + (x + 1,00,000)}{2}}$$

$$2x + 1,00,000 = \frac{3,00,000 \times 2}{3}$$

$$2x = 2,00,000 - 1,00,000$$

$$x = \frac{1,00,000}{2}$$

Opening Trade Receivable = 50,000

Closing Trade Receivable = 50,000 + 1,00,000

= 1,50,000

Case : 2

Opening Trade Receivable = x

Closing Trade Receivable = 3x

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Recivable}}$$

$$3 = \frac{3,00,000}{\frac{x + 3x}{2}}$$

$$3(x + 3x) = \frac{3,00,000 \times 2}{3 \times 4}$$

$$\begin{aligned}
 \text{Opening Trade Receivable} &= 50,000 \\
 \text{Closing Trade Receivable} &= 50,000 \times 3 \\
 &= 1,50,000
 \end{aligned}$$

Case : 3

$$\text{Opening Trade Receivable} = x$$

$$\text{Closing Trade Receivable} = x + 3x = 4x$$

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Net Credit Revenue from operation}}{\text{Avg. Trade Receivable}}$$

$$3 = \frac{3,00,000}{\frac{x+4x}{2}}$$

$$3(x + 4x) = \frac{3,00,000 \times 2}{3 \times 5}$$

$$\text{Opening Trade Receivable} = 40,000$$

$$\text{Closing Trade Receivable} = 40,000 \times 4$$

$$= 1,60,000$$

111. Calculate Trade payable turnover ratio and Average Debt payment period from the following information:

	1st April, 2022	31st March, 2023
Sundry Creditors	1,50,000	4,50,000
Bills payable	50,000	1,50,000

Total purchases 21,00,000; purchases Return 1,00,000; cash purchases 4,00,000.

Solution:

Total purchase = Cash purchase + purchase return

$$21,00,000 = 4,00,000 + \text{Credit purchase}$$

Credit purchase = 17,00,000

Net credit purchase = Credit purchase - purchase Return

$$= 17,00,000 - 1,00,000$$

$$\text{Avg. Trade payables} = \frac{\text{op.creditors} + \text{cl.creditors}}{2} + \frac{\text{Op.B/p} + \text{Cl. B/p}}{2}$$

$$= \frac{1,50,000 + 4,50,000}{2} + \frac{50,000 + 1,50,000}{2}$$

$$= 3,00,000 + 1,00,000$$

$$= 4,00,000$$

$$\text{Trade Payable Turnover Ratio} = \frac{\text{Net Credit Purchase}}{\text{Avg.Trade Recivable}}$$

$$= \frac{16,00,000}{4,00,000}$$

$$= 4 \text{ times}$$

$$\text{Avg. Debt Payment Ratio} = \frac{\text{Months in a year}}{\text{Trade payable turnover Ratio}}$$

$$= \frac{12}{4}$$

$$= 3 \text{ months}$$

112. Calculate Trade payable turnover ratio from the following information:

Opening Creditors 1,25,000; opening bills payable 10,000; closing creditors 90,000 closing bills payable 5,000 purchase 9,50,000 cash purchase 1,00,000 purchase return 45,000.

Solution:

$$\begin{aligned}\text{Net credit purchase} &= \text{Total purchase} - \text{cash purchase} - \text{purchase Return} \\ &= 9,50,000 - 1,00,000 - 45,000 \\ &= 8,05,000\end{aligned}$$

$$\begin{aligned}\text{Avg. Creditors} &= \frac{\text{Op.creditors} + \text{Cl.creditors}}{2} \\ &= \frac{1,25,000 + 90,000}{2}\end{aligned}$$

$$= \frac{2,15,000}{2} = 1,07,500$$

$$\begin{aligned}\text{Avg. Trade payable} &= \frac{\text{Op.B/p} + \text{Cl. B/p}}{2} \\ &= \frac{10,000 + 5,000}{2} \\ &= 7,500\end{aligned}$$

$$\begin{aligned}\text{Avg. Trade payable} &= \text{Avg. creditors} + \text{Avg. Bills payable} \\ &= 1,07,500 + 7,500 \\ &= 1,15,000\end{aligned}$$

$$\text{Trade Payable Turnover Ratio} = \frac{\text{Net Credit Purchase}}{\text{Avg.Trade Recivable}}$$

$$= \frac{8,05,000}{1,15,000}$$

$$= 7 \text{ times}$$

113. Calculate trade payables turnover ratio for the year 2022-23 in each of the alternative cases:

Case 1: Closing Trade payables 454,000 net purchase 3,60,000
purchases return 60,000 cash purchase 90,000

Case 2: Opening Trade payables 15,000 closing Trade payables 45,000 net purchases 3,60,000

Case 3: Closing trade payables 45,000 net purchases 3,60,000

Case 4: Closing trade payables (including 25,000 due to a supplier of machinery) 55,000 net credit purchases 3,60,000.

Case -1

Net credit purchase = Net purchase – cash purchase

$$= 3,60,000 - 90,000$$

$$= 2,70,000$$

Average trade payable = closing trade payable

$$= 45,000$$

$$\text{Trade Payable Turnover Ratio} = \frac{\text{Net Credit Purchase}}{\text{Avg. Trade Recivable}}$$

$$= \frac{2,70,000}{45,000}$$

$$= 6 \text{ times}$$

Case – 2

Net credit purchase = Net purchase

$$= 3,60,000$$

$$\begin{aligned}
 \text{Average Trade payable} &= \frac{\text{Op. T/p} + \text{Cl. T/p}}{2} \\
 &= \frac{15,000 + 45,000}{2} \\
 &= 30,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Trade Payable Turnover Ratio} &= \frac{\text{Net Credit Purchase}}{\text{Avg. Trade payable}} \\
 &= \frac{3,60,000}{30,000} \\
 &= 12 \text{ times}
 \end{aligned}$$

Case – 3

$$\begin{aligned}
 \text{Avg. trade payables} &= \text{closing trade payable} \\
 &= 45,000
 \end{aligned}$$

$$\text{Net credit purchase} = \text{Net purchases} = 3,60,000$$

$$\begin{aligned}
 \text{Trade Payable Turnover Ratio} &= \frac{\text{Net Credit Purchase}}{\text{Avg. Trade payable}} \\
 &= \frac{3,60,000}{45,000} \\
 &= 8 \text{ times}
 \end{aligned}$$

Case – 4

$$\begin{aligned}
 \text{Avg. trade payable} &= \text{closing trade payable} - \text{due to supplier of machinery} \\
 &= 55,000 - 25,000 \\
 &= 30,000
 \end{aligned}$$

Net credit purchase = 3,60,000

$$\begin{aligned}\text{Trade Payable Turnover Ratio} &= \frac{\text{Net Credit Purchase}}{\text{Avg. Trade payable}} \\ &= \frac{3,60,000}{30,000} \\ &= 12 \text{ times}\end{aligned}$$

114. A firm normally has trade receivables equal to two month's credit sales. During the coming year it expects credit sales of 7,20,000 spread evenly over the year (12 months). What is the estimated amount of trade receivables at the end of the year?

Solution:

Closing Trade Receivable = two months credit sales

$$\begin{aligned}&= \frac{7,20,000}{12} \times 2 \\ &= 1,20,000\end{aligned}$$

115. Mercury Ltd. made credit sales of 4,00,000 during the financial period. If the collection period is 36 days and year is assumed to be 360 days, calculate:

- I. Trade receivables ratio:
- II. Average trade receivables
- III. Trade receivables at the end when trade receivables at the end are more than that in the beginning by 6,000.

$$\begin{aligned}\text{Debt collection period} &= \frac{\text{Number of Days}}{\text{Trade Receivables Turnover Ratio}} \\ 36 &= \frac{360}{\text{Trade Receivables Turnover Ratio}}\end{aligned}$$

Trade receivables turnover Ratio = 10 times

$$\text{Trade receivables turnover ratio} = \frac{\text{Net credit sales}}{\text{Avg,trade receivables}}$$

$$10 = \frac{4,00,000}{\text{Avg.Trade Receivables}}$$

$$\text{Avg. Trade receivables} = 40,000$$

Let the opening trade receivables be x

$$\text{Closing trade receivables} = x + 6,000$$

$$\text{Average Trade payable} = \frac{\text{Op. T/R} + \text{Cl. T/R}}{2}$$

$$40,000 = \frac{x + (x + 6,000)}{2}$$

$$2x + 6,000 = 80,000$$

$$\text{Opening inventory} = 37,000$$

$$\text{Closing inventory} = 37,000 + 6,000$$

$$= 43,000$$

116. Calculate working capital turnover ratio from the following information:

Revenue from operations	24,00,000
Current Assets	10,00,000
Current Liabilities	4,00,000

Solution:

$$\text{Working capital} = \text{current Assets} - \text{current liabilities}$$

$$= 10,00,000$$

$$= 6,00,000$$

Revenue from operation = 24,00,000

$$\text{Working capital Turnover Ratio} = \frac{\text{Revenue from operation}}{\text{working capital}}$$

$$= \frac{24,00,000}{6,00,000}$$

$$= 4 \text{ times}$$

117. From the following information, calculate working capital turnover Ratio:

Cost of revenue from operations (cost of goods sold) 5,00,000

Current Assets 2,50,000

Current Liabilities 1,50,000

Solution:

Net revenue from operation = cost of revenue from operations

$$= 5,00,000$$

Working capital = current Assets – current liabilities

$$= 2,50,000 - 1,50,000$$

$$= 1,00,000$$

$$\text{Working capital Turnover Ratio} = \frac{\text{Net Revenue from operation}}{\text{working capital}}$$

$$= \frac{5,00,000}{1,00,000}$$

$$= 5 \text{ times}$$

118. Revenue from operations: cash sales 5,00,000; credit sales 6,00,000; sales return 1,00,000 current Assets 3,00,000; current liabilities 1,00,000. Calculate working capital turnover Ratio.

Solution:

Net revenue from operation = cash sales + credit sales – sales return

$$= 5,00,000 + 6,00,000 - 1,00,000$$

$$= 10,00,000$$

Working capital = current Assets – Current liabilities

$$= 3,00,000 - 1,00,000$$

$$= 2,00,000$$

Working capital Turnover Ratio = $\frac{\text{Net Revenue from operation}}{\text{working capital}}$

$$= \frac{10,00,000}{2,00,000}$$

$$= 5 \text{ times}$$

119. Equity share capital 15,00,000; Gross profit on Revenue from operations, i.e., sales $33\frac{1}{3}\%$ Cost of revenue from operations or cost of goods sold 20,00,000; Current Assets 10,00,000; Current liabilities 2,50,000. Calculate working capital turnover Ratio.

Solution;

Gross profit = revenue from operation – cost of revenue from op.

$$33\frac{1}{3}\% \text{ of } x = x - 20,00,000$$

$$x - \frac{1}{3}x = 20,00,000$$

$$x = \frac{20,00,000 \times 3}{2}$$

$$\text{Revenue from operation} = 30,00,000$$

$$\text{Working capital Turnover Ratio} = \text{Current Assets} - \text{Current Liabilities}$$

$$= 10,00,000 - 2,50,000$$

$$= 7,50,000$$

$$\text{Working capital Turnover Ratio} = \frac{\text{net Revenue from operation}}{\text{working capital}}$$

$$= \frac{30,00,000}{7,50,000}$$

$$= 4 \text{ times}$$

120. Gross profit at 25% on cost: Gross profit 5,00,000 equity share capital 10,00,000 reserve and surplus 2,00,000 long-term loan 3,00,000; fixed Assets (Net) 10,00,000. Calculate working capital Turnover Ratio.

Solution:

Gross profit = 25% on cost of goods sold

$$5,00,000 = \frac{25}{100} \times \text{cost of goods sold}$$

$$\text{Cost of goods sold} = \frac{5,00,000 \times 100}{25}$$

$$= 20,00,000$$

Net revenue from operation = cost of goods sold + gross profit

$$= 20,00,000 + 5,00,000$$

$$= 25,00,000$$

Equity share capital + reserves & surplus = fixed Assets (Net) + Current
+ Long term loans + current liabilities Assets

$$10,00,000 + 2,00,000 + 3,00,000 + \text{current} = 10,00,000 + \text{Current Assets} \\ \text{Liabilities}$$

$$\text{Current Assets} - \text{Current liabilities} = 5,00,000$$

$$\text{Working capital} = 5,00,000$$

$$\text{Working capital Turnover Ratio} = \frac{\text{net Revenue from operation}}{\text{working capital}}$$

$$= \frac{25,00,000}{5,00,000}$$

$$= 5 \text{ times}$$

121. Capital employed 12,00,000 net fixed Assets 8,00,000 cost of goods sold or cost or revenue form operations 40,00,000 gross profit is 20% on cost. Calculate working capital turnover Ratio.

Solution:

Gross profit = Revenue from operation - cost of revenue from operation

$$20\% \text{ of } 40,00,000 = \text{Revenue from operation} - 40,00,000$$

$$\text{Revenue from operation} = 40,00,000 + 8,00,000$$

$$= 48,00,000$$

Capital employed + current liabilities = Net fixed Assets + current Assets

12,00,000 + current liabilities = 8,00,000 + current Assets

Current Assets - Current liabilities = 12,00,000 - 8,00,000

working capital = 4,00,000

$$\begin{aligned}\text{Working capital Turnover Ratio} &= \frac{\text{Net Revenue from operation}}{\text{working capital}} \\ &= \frac{48,00,000}{4,00,000} \\ &= 12 \text{ times}\end{aligned}$$

122. Calculate working capital turnover ratio from the following information:

Revenue from operations 15,00,000; current Assets 6,25,000;
Total Assets 10,00,000; Non-current liabilities 5,00,000,
shareholders funds 2,50,000.

Solution:

Shareholder's funds + Non-current Liabilities + Current Liabilities = Total Assets

= 2,50,000 + 5,00,000 + current liabilities = 10,00,000

= Current liabilities = 10,00,000 - 7,50,000

= 2,50,000

Working capital = Current Assets - Current liabilities

= 6,25,000 - 2,50,000

Revenue from operations = 15,00,000

$$= \frac{15,00,000}{3,75,000}$$

123. A company earns Gross profit of 25% on cost. for the year ended 31st March, 2017 its Gross profit was 5,00,000; Equity share capital of the company was 10,00,000; Reserves and surplus 2,00,000; long-term loan 3,00,000 and Non-current Assets were 10,00,000.

Solution:

$$5,00,000 = \frac{25}{100} \times \text{cost of goods sold}$$

Net revenue from operation = cost of goods sold + Gross profit

= 25,00,000

10,00,000 + 2,00,000 + 3,00,000 + current liabilities = 10,00,000 + Current Assets

$$\text{Current liabilities} - \text{current Assets} = 10,00,000 + 2,00,000 + 3,00,000 - 10,00,000$$

$$\text{working capital} = 5,00,000$$

$$\begin{aligned}\text{Working capital Turnover Ratio} &= \frac{\text{Net Revenue from operation}}{\text{working capital}} \\ &= \frac{25,00,000}{5,00,000} \\ &= 5 \text{ times}\end{aligned}$$

124. Net fixed Assets 5,00,000, Revenue from operations 25,00,000.
calculate fixed Assets turnover ratio.

Solution:

$$\text{Revenue from operation} = 25,00,000$$

$$\text{Net Fixed Assets} = 5,00,000$$

$$\begin{aligned}\text{Fixed Assets Turnover Ratio} &= \frac{\text{Revenue from operation}}{\text{Net fixed Assets}} \\ &= \frac{25,00,000}{5,00,000} \\ &= 5 \text{ times}\end{aligned}$$

125. Fixed Assets (at cost) 7,00,000, Accumulated Depreciation 1,00,000, Credit Revenue from operations 17,00,000 cash revenue from operations 1,00,000. Calculated Fixed Assets Turnover Ratio.

Solution:

Revenue from operations = Credit revenue from operations + cash
revenue from operation

$$= 17,00,000 + 1,00,000$$

$$= 6,00,000$$

Fixed Assets Turnover Ratio = $\frac{\text{Revenue from operation}}{\text{Net fixed Assets}}$

$$= \frac{18,00,000}{6,00,000}$$

$$= 3 \text{ times}$$

126. Capital Employed 2,50,000, working capital 50,000, cost of Revenue from operations 8,00,000, Gross profit 2,00,000. Calculate fixed Assets Turnover Ratio.

Solution:

Revenue from operation = 1,00,000

Capital employed + Current liabilities = Net fixed Assets + Current
Assets

Net fixed Assets = capital employed + current liabilities - current
Assets

= Capital employed - (current Assets - Current liabilities)

= Capital Employed - working capital

$$= 2,50,000 - 50,000$$

$$= 2,00,000$$

Fixed Assets turnover ratio = $\frac{\text{Revenue from operation}}{\text{Net fixed Assets}}$

$$= \frac{10,00,000}{2,00,000}$$

$$= 5 \text{ times}$$

127. Following information is of Raja Ltd. for 2 years, calculate fixed Assets Turnover Ratio:

	2021-22	2022-23
Fixed Assets at written down value	3,00,000	6,00,000
Cost of Revenue form operations	12,00,000	18,00,000

Solution:

2021-22

Net fixed Assets = 3,00,000

Revenue from operations = cost of revenue from operations

$$= 12,00,000$$

Fixed Assets turnover ratio = $\frac{\text{Revenue from operation}}{\text{Net fixed Assets}}$

$$= \frac{12,00,000}{3,00,000}$$

$$= 4 \text{ times}$$

Note: In the absence of any further data, revenue from operation is equal to cost of revenue from operation

2022-23

Net fixed Assets = 6,00,000

Revenue from operations = cost of revenue from operations

$$= 18,00,000$$

Fixed Assets turnover ratio = $\frac{\text{Revenue from operation}}{\text{Net fixed Assets}}$

$$= \frac{18,00,000}{6,00,000}$$

$$= 3 \text{ times}$$

Note: In the absence of any further data, revenue from operation is equal to cost of revenue from operation

128. Capital employed 30,00,000; working capital 5,00,000; cost of revenue from operations 40,00,000; Gross profit 25% of cost. Calculate Fixed Assets Turnover Ratio.

Solution:

Net fixed Assets = Capital employed - working capital

$$= 30,00,000 - 5,00,000$$

$$= 25,00,000$$

Gross profit = Revenue from operation - cost of revenue from operation

$$\frac{25}{100} \times 40,00,000 = \text{Revenue from operation} - 40,00,000$$

Revenue from operation = 40,00,000 + 10,00,000

$$= 50,00,000$$

Fixed Assets turnover ratio = $\frac{\text{Revenue from operation}}{\text{Net fixed Assets}}$

$$= \frac{50,00,000}{25,00,000}$$

$$= 2 \text{ times}$$

129. Based on the following information, calculate net Assets or capital employed turnover ratio:

Share holder's funds 20,00,000 Equity share capital 10,00,000
Reserves and surplus 10,00,000 8% debentures 10,00,000 and
revenue from operations 75,00,000.

Solution:

Capital employed = shareholders' funds + 8% Debentures

$$= 20,00,000 + 10,00,000$$

$$= 30,00,000$$

Revenue form operation = 75,00,000

$$\text{Net Assets Turnover Ratio} = \frac{\text{Revenue from operation}}{\text{Capital Employed}}$$

$$= \frac{75,00,000}{30,00,000}$$

$$= 2.5 \text{ times}$$

130. Property, plant and equipment and intangible Assets (at cost) 30,00,000; Accumulated depreciation 5,00,000; Trade investment 2,50,000; Current Assets 11,00,000; Current liabilities 8,50,000; Cash Revenue from operations 10,00,000; Credit revenue from operations 40,00,000

Calculate Net Assets Turnover Ratio.

Solution:

Net Assets = property plant and equipment and intangible Assets (at cost)

**- Acc. depreciation + Trade investment + current Assets -
Current liabilities**

= 30,00,000 - 5,00,000 + 2,50,000 + 11,00,000 - 8,50,000

= 30,00,000

**Revenue from operation = cash revenue from operation + credit
revenue from operation**

= 10,00,000 + 40,00,000

= 50,00,000

Net Assets Turnover Ratio = $\frac{\text{Revenue from operation}}{\text{Capital Employed (Net Assets)}}$

= $\frac{50,00,000}{30,00,000}$

= 1.67 times

131. Fixed Assets 10,00,000; working capital 5,00,000; cost of revenue from operations 50,00,000 Gross profit 20% of cost.

Cost Net Assets or capital employed turnover Ratio.

Solution:

Gross profit = Revenue from operation - cost of revenue from operation

$$\frac{20}{100} \times 50,00,000 = \text{Revenue from operation} - 50,00,000$$

$$\begin{aligned}\text{Revenue from operation} &= 50,00,000 + 10,00,000 \\ &= 60,00,000\end{aligned}$$

Capital employed + Current liabilities = Net fixed Assets + Current Assets

Capital employed = Net fixed Assets + Current Assets - Current liabilities

$$\begin{aligned}&= \text{Net fixed Assets} + \text{working capital} \\ &= 10,00,000 + 5,00,000 \\ &= 15,00,000\end{aligned}$$

$$\begin{aligned}\text{Net Assets Turnover Ratio} &= \frac{\text{Revenue from operation}}{\text{Capital Employed}} \\ &= \frac{60,00,000}{15,00,000} \\ &= 4 \text{ times}\end{aligned}$$

132. Shareholder's funds 10,00,000; Long-term Debts 20,00,000; Gross profit at 20% on cost was 20,00,000. Calculate Net Assets or capital employed turnover Ratio.

Solution:

Capital Employed = Shareholder's funds+ Long-term debts

$$\text{Capital Employed} = 10,00,000 + 20,00,000$$

Capital Employed = 30,00,000

Gross profit = 20% on cost

20,00,000 = 20% on cost

Cost of Revenue from operation = 20,00,000 x 100/20

Cost of Revenue from operation = 1,00,00,000

Revenue from operation = cost of revenue from operation + Profit

Revenue from operation = 1,00,00,00 + 20,00,000

Revenue from operation = 1,20,00,000

**Net Assets Turnover operation = Revenue from operation/ Capital
Employed**

Net Assets Turnover Ratio = 1,20,00,000/30,00,000

Net Assets Turnover Ratio = 4 times

133. From the following Balance Sheet of Akhil Ltd. as at 31st march, 2023, calculate (i) net assets turnover ratio and (ii) fixed assets turnover ratio:

Particulars	Note No.	
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share capital		10,00,000
(b) Reserve and surplus		3,00,000
2. Non-Current Liabilities		
Long-term Borrowings		5,00,000

8% Debentures:		
3. Current Liabilities		
(a) Trade payables		1,50,000
(b) Other current liabilities		<u>50,000</u>
Total		<u>20,00,000</u>
II. ASSETS		
1. Non-current Assets		
Property, Plant and Equipment and intangible Assets:		13,00,000
-property, plant and equipment (net of Depreciation)		
2. Current Assets		
(a) Inventories		3,00,000
(b) Trade Receivables		2,50,000
(c) Cash and Cash Equivalentents		<u>1,50,000</u>
Total		<u>20,00,000</u>

Revenuer from operations for the year was 45,00,000.

Solution:

Capital Employed = share capital + reserve & surplus + 8% Debentures

$$= 10,00,000 + 3,00,000 + 5,00,000$$

$$= 18,00,000$$

Revenue from operation = 45,00,000

$$\begin{aligned}
 \text{Net Assets Turnover Ratio} &= \frac{\text{Revenue from operation}}{\text{Capital Employed}} \\
 &= \frac{45,00,000}{18,00,000} \\
 &= 2.5 \text{ times}
 \end{aligned}$$

$$\begin{aligned}
 \text{Net Fixed Assets} &= \text{Property plant \& Equipment (Net Depreciation)} \\
 &= 13,00,000
 \end{aligned}$$

$$\text{Revenue from operation} = 45,00,000$$

$$\begin{aligned}
 \text{Net Assets Turnover Ratio} &= \frac{\text{Revenue from operation}}{\text{Capital Employed}} \\
 &= \frac{45,00,000}{13,00,000} \\
 &= 3.4615 = 3.46 \text{ times}
 \end{aligned}$$

134. From the following, calculate Gross Profit Ratio:

Gross Profit: 50,000; revenue from operation 5,00,000; sales Return 50,000.

Solution:

$$\begin{aligned}
 \text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Revenue from operation}} \times 100 \\
 &= \frac{50,000}{5,00,000} \times 100 \\
 &= 10\%
 \end{aligned}$$

135. Compute Gross profit Ratio form the following information:

Cost of revenue from operations (cost of goods sold) 5,40,000;
revenue from operations (Net sales) 6,00,000.

Solution:

**Gross profit = revenue from operation - cost of revenue from
operation**

$$= 6,00,000 - 5,40,000$$

$$= 60,000$$

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

$$= \frac{60,000}{6,00,000} \times 100$$

$$= 10\%$$

136. Computer Gross profit Ratio from the following information:

Revenue from operations, i.e., Net sales = 4,00,000; Gross profit
25% on cost.

Solution;

**Gross profit = revenue from operation - cost of revenue from
operation**

$$\frac{25}{100} x = 4,00,000 - x$$

$$\frac{1}{4} x + x = 4,00,000$$

$$\frac{5x}{4} = 4,00,000 x$$

$$X = \frac{4,00,000 \times 4}{5}$$

Cost of revenue from operation = 3,20,000

Gross profit = Revenue from operation - cost of revenue from operation

$$= 4,00,000 - 3,20,000$$

$$= 80,000$$

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

$$= \frac{80,000}{4,00,000} \times 100$$

$$= 20\%$$

137. Calculate gross profit ratio from the following data:

Cash sales are 20% of Total sales are 5,00,000; purchases are 4,00,000; Excess of closing inventory over opening inventory 25,000.

Solution:

Total sales = cash sales + credit sales

$$X = \frac{20}{100} X = 5,00,000$$

$$X - \frac{20}{100} X = 5,00,000$$

$$\frac{80X}{100} = 5,00,000$$

$$\text{Total sales} = 5,00,000 \times \frac{100}{80}$$

Revenue from operation = 6,25,000

Cost of goods sold = opening inventory + purchases - closing inventory

= purchases - (closing inventory - opening inventory)

= 4,00,000 - 25,000

= 3,75,000

Gross profit = Revenue from operation - cost of goods sold

= 6,25,000 - 3,75,000

= 2,50,000

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

= $\frac{2,50,000}{6,25,000} \times 100$

= 40%

138. From the following information, calculation Gross profit Ratio:

Credit sales	10,00,000
Purchases	6,00,000
Carriage inwards	20,000
Decrease in inventory	20,000
Return outward	20,000
Wages	1,00,000
Rate of credit sales to cash sale	4:1

Solution:

Revenue from operation = credit sales + cash sales - sales return

$$= 10,00,000 + 10,00,000 \times \frac{1}{4} - 0$$

$$= 12,50,000$$

**Cost of goods sold = purchases - Return outward + Carriage inward +
wages + Decrease In inventory**

$$= 6,00,000 - 20,000 + 20,000 + 1,00,000 + 20,000$$

$$= 7,20,000$$

Gross profit = Revenue from operation - cost of Goods sold

$$= 12,50,000 - 7,20,000$$

$$= 5,30,000$$

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

$$= \frac{5,30,000}{12,50,000} \times 100$$

$$= 42.4 \%$$

139. From the following information, calculate Gross profit Ratio:

Revenue from operations:

Cash	2,00,000	Carriage inwards	8,000
Credit	8,00,000	Salaries	42,000
Purchases:		Decreases in inventory	1,22,000

Cash	40,000	Return Outwards	20,000
Credit	3,60,000	Wages	20,000

Solution:

Revenue from operation = Credit sales + Cash sales

$$= 8,00,000 + 2,00,000$$

$$= 10,00,000$$

Cost of goods sold = purchases (cash + credit) - Return outward + wages + Carriage inward + Decrease In inventory
= (3,60,000 + 40,000) - 20,000 + 20,000 + 8,000 + 1,22,000
= 5,30,000

Gross profit = Revenue from operation - cost of goods sold

$$= 10,00,000 - 5,30,000$$

$$= 4,70,000$$

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

$$= \frac{4,70,000}{10,00,000} \times 100$$

$$= 47 \%$$

140. Opening inventory 2,00,000; closing inventory 1,20,000. Inventory Turnover Ratio 8 times; Selling price 25% above cost. Calculate Gross profit Ratio.

Solution:

Inventory Turnover Ratio = $\frac{\text{Cost of goods Sold}}{\text{Avg.Inventory}}$

$$8 = \frac{\text{Cost of goods sold}}{\frac{2,00,000 + 1,20,000}{2}}$$

$$\text{Cost of Goods sold} = \frac{8 (3,20,000)}{2}$$

$$= 12,80,000$$

$$\text{Revenue from operation} = \text{cogs} + 25\% \text{ of cogs}$$

$$= 12,80,000 + \frac{25}{100} \times 12,80,000$$

$$= 12,80,000 + 3,20,000$$

$$= 16,00,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{cost of goods sold}$$

$$= 16,00,000 - 12,80,000$$

$$= 3,20,000$$

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

$$= \frac{3,20,000}{16,00,000} \times 100$$

$$= 20 \%$$

141. A trade carries an Average inventory of 1,00,000. His inventory Turnover Ratio is 8 times. He sells goods at a profit of 25% of cost. Calculate Gross Profit Ratio.

Solution:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\text{Avg.Inventory}}$$

$$8 = \frac{\text{Cost of goods sold}}{1,00,000}$$

$$\text{Cost of Goods sold} = 8,00,000$$

$$\text{Revenue from operation} = \text{cogs} + 25\% \text{ of cogs}$$

$$= 8,00,000 + \frac{25}{100} \times 8,00,000$$

$$= 10,00,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{cost of goods sold}$$

$$= 10,00,000 - 8,00,000$$

$$= 2,00,000$$

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

$$= \frac{2,00,000}{10,00,000} \times 100$$

$$= 20 \%$$

142. Calculate Gross profit ratio form the following data:

Average inventory 3,20,000; inventory turnover ratio 8 times;
Average trade receivables 4,00,000 trade receivables turnover
ratio 6 times; cash sales 25% of Net sales.

Solution:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\text{Avg.Inventory}}$$

$$8 = \frac{\text{Cost of goods sold}}{3,20,000}$$

$$\text{Cost of Goods sold} = 3,20,000 \times 8 = 25,60,000$$

$$\text{Trade receivables turnover ratio} = \frac{\text{Net credit revenue from operations}}{\text{Avg, trade receivables}}$$

$$6 = \frac{\text{Net credit revenue from operations}}{4,00,000}$$

$$\text{Net credit revenue from operation} = 24,00,000$$

$$\text{Revenue from operation} = \text{Net credit revenue from operation} + \text{cash revenue from operation}$$

$$X = 24,00,000 + \frac{25x}{100}$$

$$X - \frac{25x}{100} = 24,00,000$$

$$\frac{75x}{100} = 24,00,000$$

$$\text{Revenue from operation} = \frac{24,00,000 \times 100}{75}$$

$$= 32,00,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{cost of goods sold}$$

$$= 32,00,000 - 25,60,000$$

$$= 6,40,000$$

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

$$= \frac{6,40,000}{32,00,000} \times 100$$

$$= 20 \%$$

143. (i) Revenue from operation: cash sales 4,20,000; credit sales 6,00,000; Return 20,000 cost of Revenue from Operations or cost of Goods sold 8,00,000. Calculate Gross profit Ratio.

(ii) Average Inventory 1,60,000; Inventory Ratio 6 Times; Selling price 25% above cost. Calculate Gross profit Ratio.

(iii) Opening inventory 1,00,000; Closing Inventory 60,000; Inventory Turnover Ratio 8 times; selling price 25% above cost. Calculate Gross Profit Ratio.

Solution:

Case - 1

Net Revenue from operation = Credit sales + Cash sales - Sales Return

$$= 6,00,000 + 4,20,000 - 20,000$$

$$= 10,00,000$$

$$\text{Cost of Goods sold} = 8,00,000$$

Gross profit = Net revenue from operation - Cost of goods sold

$$= 10,00,000 - 8,00,000$$

$$= 2,00,000$$

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

$$= \frac{2,00,000}{10,00,000} \times 100$$

$$= 20 \%$$

Case - 2

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\text{Avg. Inventory}}$$

$$6 = \frac{\text{Cost of goods sold}}{1,60,000}$$

$$\text{Cost of Goods sold} = 9,60,000$$

$$\text{Revenue from operation} = \text{cogs} + 25\% \text{ of cogs}$$

$$= 9,60,000 + \frac{25}{100} \times 9,60,000$$

$$= 9,60,000 + 2,40,000$$

$$= 12,00,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{cost of goods sold}$$

$$= 12,00,000 - 9,60,000$$

$$= 2,40,000$$

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

$$= \frac{2,40,000}{12,00,000} \times 100$$

$$= 20 \%$$

Case - 3

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods Sold}}{\frac{\text{Op..Inventory} + \text{Cl.Inventory}}{2}}$$

$$6 = \frac{\text{Cost of goods sold}}{\frac{1,00,000 + 60,000}{2}}$$

$$\text{Cost of Goods sold} = \frac{8 (1,60,000)}{2} = 6,40,000$$

$$\text{Revenue from operation} = \text{cogs} + 25\% \text{ of cogs}$$

$$= 6,40,000 + 25\% \text{ of } 6,40,000$$

$$= 6,40,000 + 1,60,000$$

$$= 8,00,000$$

Gross profit = Revenue from operation - cost of goods sold

$$= 8,00,000 - 6,40,000$$

$$= 1,60,000$$

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

$$= \frac{1,60,000}{8,00,000} \times 100$$

$$= 20 \%$$

144. Gross profit Ratio of a company is 25%. state, giving reason, which of the following transactions will

(a) increase or (b) decrease or (c) not alter the Gross profit Ratio.

(i) Purchases of stock-in-Trade 50,000.

(ii) purchases Return 15,000.

(iii) Cash sale of stock-in-Trade 40,000.

(iv) Stock-in-Trade costing 20,000 withdrawn for personal use.

(v) Stock-in-Trade costing 15,000 distributed as free sample.

Solution:

145. Revenue from operations 12,00,000, cost of revenue from operations 5,00,000. Opening cost 6,00,000. Calculate Ratio.

Solution:

Opening Cost = 6,00,000

Revenue from operation = 12,00,000

$$\begin{aligned}\text{Operating Ratio} &= \frac{\text{Operating Cost}}{\text{Revenue from operation}} \times 100 \\ &= \frac{6,00,000}{12,00,000} \times 100 \\ &= 50 \%\end{aligned}$$

146. Cost of Revenue from operations (Cost of goods sold) 3,00,000.

Operating Expenses 1,20,000. Revenue from Operations: Cash sales 5,20,000; Return 20,00,000. Calculate operating Ratio.

Solution:

Operating cost = Cost of goods sold + Operating expenses

$$= 3,00,000 + 1,20,000$$

$$= 4,20,000$$

Revenue from operation = Cash sales - sales Return

$$= 5,20,000 - 20,000$$

$$= 5,00,000$$

$$\begin{aligned}\text{Operating Ratio} &= \frac{\text{Operating Cost}}{\text{Revenue from operation}} \times 100 \\ &= \frac{4,20,000}{5,00,000} \times 100 \\ &= 84 \%\end{aligned}$$

147. Operating Ratio 92%; Operating expenses 94,000; Revenue from operations 6,00,000; sales Return 40,000. Calculate cost of Revenue from operations (Cost of goods sold).

Solution

$$\text{Operating Ratio} = \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Revenue from operation}} \times 100$$

$$92 = \frac{\text{Cost of Goods sold} + 94,000}{6,00,000} \times 100$$

$$\text{Cost of Goods sold} + 94,000 = \frac{92 \times 6,00,000}{100}$$

$$\begin{aligned}\text{Cost of goods sold} &= 5,52,000 - 94,000 \\ &= 4,58,000\end{aligned}$$

148. From the following information, calculate operating Ratio:

Cost of Revenue

From operations (cost of goods sold) 52,000

Operating Expenses 18,000

Revenue from Operations:

Gross sales 88,000

Sales Return 8,000

solution:

Revenue from operation = Gross sales - sales Return

$$= 88,000 - 8,000$$

$$= 80,000$$

$$\begin{aligned}
 \text{Operating Ratio} &= \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Revenue from operatoin}} \times 100 \\
 &= \frac{52,000 + 18,000}{80,000} \times 100 \\
 &= \frac{70,000}{80,000} \times 100 \\
 &= 87.5\%
 \end{aligned}$$

149. Calculate cost of Revenue from operations from the information:

Revenue from operations 12,00,000; Opening Ratio 75%;
Operating Expenses 1,00,000.

Solution:

$$\begin{aligned}
 \text{Operating Ratio} &= \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Revenue from operatoin}} \times 100 \\
 92 &= \frac{\text{Cost of Revenue from operation} + 1,00,000}{12,00,000} \times 100
 \end{aligned}$$

$$\begin{aligned}
 \text{Cost of Revenue from operation} &= \frac{75 \times 12,00,000}{100} - 1,00,000 \\
 &= 8,00,000
 \end{aligned}$$

150. Calculate Operating Ratio from the following information:

Operating cost 6,80,000; Gross Profit 25%; Operating Expenses 80,000.

Solution:

Operating cost = Cost of Goods sold + Operating Expenses

$$6,80,000 = \text{Cost of Goods sold} + 80,000$$

Cost of Goods sold = 6,00,000

Gross profit = Revenue from operation - cost of goods sold

$$\frac{25}{100} x = x - 6,00,000$$

$$x - \frac{25}{100} x = 6,00,000$$

$$x - \frac{75x}{100} = 6,00,000$$

$$\text{Revenue from operation} = \frac{6,00,000 \times 100}{75}$$

$$= 8,00,000$$

$$\text{Operating Ratio} = \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Revenue from operation}} \times 100$$

$$= \frac{6,00,000 + 80,000}{8,00,000} \times 100$$

$$= \frac{6,80,000}{8,00,000} \times 100$$

$$= 85 \%$$

151. (i) Cost of Revenue from operations (cost of goods sold) 2,20,000; Revenue from operations (Net Sales) 3,20,000; Selling Expenses 12,000; Office Expenses 8,000; Depreciation 6,000. Calculate Operating Ratio.

(ii) Revenue from operations, cash Sales 4,00,000; Credit sales 1,00,000; Gross Profit 1,00,000; Office and selling Expenses 50,000. Calculate Operating Ratio.

Solution:

Case - 1

$$\text{Operating expenses} = \text{Selling Expenses} + \text{Office Expenses} + \text{Depreciation}$$

$$= 12,000 + 8,000 + 6,000$$

$$= 26,000$$

$$\text{Operating Ratio} = \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Revenue from operation}} \times 100$$

$$= \frac{2,20,000 + 26,000}{3,20,000} \times 100$$

$$= \frac{2,46,000}{3,20,000} \times 100$$

$$= 76.875\%$$

Case - 2

$$\text{Revenue from operation} = \text{Cash sales} + \text{credit sales}$$

$$= 4,00,000 + 1,00,000$$

$$= 5,00,000$$

$$\text{Cost of Goods sold} = \text{Revenue from operation} - \text{Gross profit}$$

$$= 5,00,000 - 1,00,000$$

$$= 4,00,000$$

$$\text{Operating Ratio} = \frac{\text{Cost of Goods sold} + \text{Office \& selling Exp.}}{\text{Revenue}} \times 100$$

$$= \frac{4,00,000 + 50,000}{5,00,000} \times 100$$

$$= \frac{4,50,000}{50,000} \times 100$$

$$= 90 \%$$

152. Calculate Operating Profit Ratio from the following:

Revenue from Operations (Net sales)	5,00,000
Cost of Revenue from operations (Cost of Goods sold)	2,00,000
Wages	1,00,000
Office and Administrative Expenses	50,000
Interest on Borrowings	5,000

Solution:

$$\text{Opening Expenses} = \text{Office \& Administrative Expenses}$$

$$= 50,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{Cost of Goods sold}$$

$$= 5,00,000 - 2,00,000$$

$$= 3,00,000$$

$$\text{Opening Profit} = \text{Gross Profit} - \text{Operating Expenses}$$

$$= 3,00,000 - 50,000$$

$$= 2,50,000$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100$$

$$= \frac{2,50,000}{5,00,000} \times 100$$

$$= 50 \%$$

153. Calculate Operating profit ratio from the following information:

Opening inventory	1,00,000
Purchases	10,00,000
Revenue from operations, i.e., Net sales	14,70,000
Administrative and Selling Expenses	1,70,000
Closing inventory	1,50,000
Loss by fire	20,000
Dividend Received	30,000

Solution:

Cost of goods sold = Opening inventory + Purchase - closing inventory

$$= 1,00,000 + 10,00,000 - 1,50,000$$

$$= 9,50,000$$

Gross profit = Revenue from operation - Cost of goods sold

$$= 14,70,000 - 9,50,000$$

$$= 5,20,000$$

Operating profit = Gross profit - Administrative & selling Expenses

$$= 5,20,000 - 1,70,000$$

$$= 3,50,000$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100$$

$$= \frac{3,50,000}{14,70,00} \times 100$$

$$= 23.81\%$$

154. Revenue from operations 9,00,000; Gross profit 25% on cost; Operating Expenses 45,000. Calculate Operating Profit Ratio.

Solution:

Gross profit = Revenue from operation - Cost of goods sold

$$\frac{25}{100} x = 9,00,000 - x$$

$$x + \frac{25}{100} x = 9,00,000$$

$$x - \frac{125x}{100} = 9,00,000$$

$$\text{Cost of Goods sold} = \frac{9,00,000 \times 100}{125}$$

$$= 7,20,000$$

$$\text{Gross profit} = 9,00,000 - 7,20,000$$

$$= 1,80,000$$

$$\text{Opening profit} = \text{Gross profit} - \text{Opening Expenses}$$

$$= 1,80,000 - 45,000$$

$$= 1,35,000$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100$$

$$= \frac{1,35,000}{9,00,000} \times 100$$

$$= 15 \%$$

155. Operating Cost 3,40,000; gross profit ratio 20% operating expenses 20,000. calculate operating profit ratio.

Solution:

Operating cost = Cost of Goods sold + Operating Expenses

$$3,40,000 = \text{Cost of Goods sold} + 20,000$$

$$\text{Cost of Goods sold} = 3,40,000 - 20,000$$

$$= 3,20,000$$

Gross profit = Revenue from operation - Cost of goods sold

$$\frac{20}{100} x = x - 3,20,000$$

$$x - \frac{20x}{100} = 3,20,000$$

$$\frac{80x}{100} = 3,20,000$$

$$\text{Revenue from operation} = \frac{3,20,000 \times 100}{80}$$

$$= 4,00,000$$

$$\text{Gross profit} = 4,00,000 - 3,20,000$$

$$= 80,000$$

Opening profit = Gross profit - Opening Expenses

$$= 80,000 - 20,000$$

$$= 60,000$$

$$\begin{aligned}
 \text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{\text{Revenue from operation}} \times 100 \\
 &= \frac{60,000}{4,00,000} \times 100 \\
 &= 15 \%
 \end{aligned}$$

156. What will be the operating profit Ratio, if operating Ratio is 82.59 % ?

Solution:

$$\text{Operating Profit Ratio} + \text{Operating Ratio} = 100$$

$$\text{Operating profit Ratio} + 82.59 = 100$$

$$\text{Operating Profit Ratio} = 100 - 82.59$$

$$= 17.41 \%$$

157. Calculate Operating profit Ratio in each of the following alternative cases:

Case - 1: Revenue from Operation (Net sales) 20,00,000; Operating Profit 3,00,000.

Case - 2: Revenue from Operation (Net sales) 6,00,000; Operating Cost 5,10,000.

Case - 3: Revenue from Operation (Net sales) 3,60,000; Gross Profit 20% on sales; Operating Expenses 18,000.

Case - 4: Revenue from Operation (Net sales) 4,50,000; Cost of Revenue operations 3,60,000; Operating Expenses 22,500.

**Case - 5: Cost of Goods sold, i.e., Cost of Revenue from Operations
4,00,000; Gross Profit 20% on sales; Operating Expenses 25,000.**

Solution:

Case - 1

$$\begin{aligned}\text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{3,00,000}{2,00,000} \times 100 \\ &= 15 \%\end{aligned}$$

Case - 2

$$\begin{aligned}\text{Operating profit} &= \text{Revenue from operation} - \text{Operating cost} \\ &= 6,00,000 - 5,10,000 \\ &= 90,000\end{aligned}$$

$$\begin{aligned}\text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{90,000}{6,00,000} \times 100 \\ &= 15 \%\end{aligned}$$

Case - 3

Gross Profit

$$\begin{aligned}&= \frac{20}{100} \times 3,60,000 \\ &= 72,000\end{aligned}$$

$$\text{Operating profit} = \text{Gross Profit} - \text{Operating Expenses}$$

$$= 72,000 - 18,000$$

$$= 54,000$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100$$

$$= \frac{54,000}{3,60,000} \times 100$$

$$= 15 \%$$

Case - 4

$$\text{Gross profit} = \text{Revenue from operation} - \text{Cost of Revenue from operation}$$

$$= 4,50,000 - 3,60,000$$

$$= 90,000$$

$$\text{Operating profit} = \text{Gross Profit} - \text{Operating Expenses}$$

$$= 90,000 - 22,500$$

$$= 67,500$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operatoin}} \times 100$$

$$= \frac{67,500}{4,50,000} \times 100$$

$$= 15 \%$$

Case - 5

Gross profit = Revenue from operation - Cost of Revenue from operation

$$\frac{20}{100} x = x - 4,00,000$$

$$x - \frac{20x}{100} = 4,00,000$$

$$\frac{80x}{100} = 4,00,000$$

$$\text{Revenue from operation} = \frac{4,00,000 \times 100}{80}$$

$$= 5,00,000$$

$$\text{Gross profit} = 5,00,000 - 4,00,000$$

$$= 1,00,000$$

Opening profit = Gross profit - Opening Expenses

$$= 1,00,000 - 25,000$$

$$= 75,000$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from operation}} \times 100$$

$$= \frac{75,000}{5,00,000} \times 100$$

$$= 15 \%$$

158. Operating profit ratio of star Ltd. is 20%. State, giving reason, which of the following transactions will (i) increase, (ii) decrease, or (iii) not alter the operating profit ratio:

a) Purchase of Stock-in-Trade 1,00,000

b) Purchase returns 20,000

c) Revenue from operations on sale of stock-in-Trade 1,25,000

d) Stock-in-Trade costing 25,000 withdrawn for personal use.

Assuming that operating cost is variable, i.e., varies with revenue from operations.

Solution:

159. Cash sales 2,20,000; Credit sales 3,00,000; sales Return 20,000; Gross profit 1,00,000; Operating Expenses 25,000; Non-operating incomes 30,000; Non-Operating Expenses 5,000. Calculate Net profit Ratio.

Solution:

Revenue from operation = cash sales + credit sales - sales Return

$$= 2,20,000 + 3,00,000 - 20,000$$

$$= 5,00,000$$

Net Profit= Gross profit + Non-Operating income - Operating Expenses

- Non-Operating Expenses

$$= 1,00,000 + 30,000 - 25,000 - 5,000$$

$$= 1,00,000$$

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

$$= \frac{1,00,000}{5,00,000} \times 100$$

$$= 20 \%$$

160. Revenue from operations, i.e., Net sales 12,00,000; Net profit 1,20,000. Calculate Net profit Ratio.

Solution:

$$\begin{aligned}\text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{1,20,000}{12,00,000} \times 100 \\ &= 10 \%\end{aligned}$$

161. Revenue from operations, i.e., Net sales 8,20,000; Return 10,000; cost of Revenue from operations (cost of goods sold) 5,20,000; Operating expenses 2,09,000; Interest on Debentures 40,500; Gain (profit) on sale of a Fixed Assets 81,000. Calculate net profit Ratio.

Solution:

Gross profit = Revenue from operation - Cost of goods sold

$$= 8,20,000 - 5,20,000$$

$$= 3,00,000$$

**Net Profit = Gross profit - operating expenses - interest on Debentures
+ gain on sale of fixed Assets**

$$= 3,00,000 - 2,09,000 - 40,500 + 81,000$$

$$= 1,31,500$$

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

$$= \frac{1,31,500}{8,20,000} \times 100$$

$$= 16.04 \%$$

162. Revenue from operations 4,00,000; Gross profit Ratio 25%; Operating Ratio 90% Non-Operating Expenses 2,000; Non-Operating income 22,000. Calculate Net profit Ratio.

Solution:

Gross profit = 25% of Revenue from operation

$$= \frac{25}{100} \times 4,00,000$$

$$= 1,00,000$$

Cost of goods sold = Revenue from operation - Gross profit

$$= 4,00,000 - 1,00,000$$

$$= 3,00,000$$

Operating Ratio = $\frac{\text{Cost of goods sold} + \text{Operating Expense}}{\text{Revenue from operation}} \times 100$

$$90 = \frac{3,00,000 + \text{Operating Expenses}}{4,00,000} \times 100$$

$$\text{Operating Exp.} = \frac{90 \times 4,00,000}{100} \times 100$$

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

$$= 60,000$$

Net Profit = Gross Profit + Non-Operating Income - Operating Exp. - Non-operating Exp.

$$= 1,00,000 + 22,000 - 60,000 - 2,000$$

$$= 60,000$$

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

$$= \frac{60,000}{4,00,000} \times 100$$

$$= 15 \%$$

163. Net Profit before interest and Tax 2,50,000; Capital Employed 10,000. Calculate Return on Investment.

Solution:

$$\text{Return on Investment} = \frac{\text{Profit Before Interest \& tax \& Dividend}}{\text{Capital Employed}} \times 100$$

$$= \frac{2,50,000}{10,00,000} \times 100$$

$$= 25\%$$

164. Net profit before interest and Tax 6,00,000; Net Fixed Assets 20,00,000; Net working capital 10,00,000; current Assets 11,00,000. Calculate Return on investment.

Solution

$$\text{Capital Employed} = \text{Net fixed Assets} + \text{Net working Capital}$$

$$= 20,00,000 + 10,00,000$$

$$= 30,00,000$$

$$\text{Return on Investment} = \frac{\text{Profit Before Interest \& tax}}{\text{Capital Employed}} \times 100$$

$$= \frac{6,00,000}{30,00,000} \times 100$$

$$= 20 \%$$

165. Net Profit before and Tax 4,00,000; 15% Long-term Debt 8,00,000; Shareholder's Funds 4,00,000. Calculate return on investment.

Solution:

$$\text{Capital Employed} = \text{Share holder's Funds} + 15\% \text{ long-term Debt}$$

$$= 4,00,000 + 8,00,000$$

$$= 12,00,000$$

$$\text{Return on Investment} = \frac{\text{Profit Before Interest \& tax}}{\text{Capital Employed}} \times 100$$

$$= \frac{4,00,000}{12,00,000} \times 100$$

$$= 33.33 \%$$

166. Net profit after interest but before tax 1,40,000; 15% long-term Debts 4,00,000; Shareholder's Funds 2,40,000; Tax rate 50%. Calculate Return on capital Employed.

Solution:

$$\text{Interest} = 15\% \text{ of long-term Debt}$$

$$= 15 \times 4,00,000$$

$$= 60,000$$

**Net profit before interest & tax = Net profit Assets interest + interest
& Before Tax**

$$= 1,40,000 + 60,000$$

$$= 2,00,000$$

Capital Employed = Share holder's Funds + long-term Debt

$$= 2,40,000 + 4,00,000$$

$$= 6,40,000$$

Return on Investment = $\frac{\text{Profit Before Interest \& tax}}{\text{Capital Employed}} \times 100$

$$= \frac{2,00,000}{6,40,000} \times 100$$

$$= 31.25 \%$$

167. Y Ltd's profit after interest and tax was 1,00,000. Its current Assets were 4,00,000; current liabilities 2,00,000; Fixed Assets 6,00,000 and 10% long-term Debt 4,00,000. The rate of tax was 20% calculate 'Return on investment' of Y Ltd.

Capital Employed = Fixed Assets + Current Assets - Current Liabilities

$$= 6,00,000 + 4,00,000 - 2,00,000$$

$$= 8,00,000$$

168. Calculate Return on investment (ROI) from the following details; net profit after Tax 6,50,000 Rate of income Tax 50%; 10% Debentures of 100 each 10,00,000; Fixed Assets at cost 22,50,000; Accumulated Depreciation on fixed Assets up to date 2,50,000; Current Assets 12,00,000; Current Liabilities 4,00,000.

Solution:

**Capital employed = Fixed Assets - Acc. Depreciation + Current Assets -
Current liabilities**

$$= 22,50,000 - 2,50,000 + 12,00,000 - 4,00,000$$

$$= 28,00,000$$

Let profit before tax & After interest be x

Profit After interest & tax = profit before tax & after - tax interest

$$6,50,000 = x - \frac{50}{100} x$$

$$\frac{50x}{100} = 6,50,000$$

$$= \frac{6,50,000 \times 100}{50}$$

Profit before tax & after interest = 13,00,000

**Profit before tax & interest = profit before tax & after interest +
interest**

$$= 13,00,000 + \frac{10}{100} \times 10,00,000$$

$$= 13,00,000 + 1,00,000$$

$$= 14,00,000$$

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

$$= \frac{14,00,000}{28,00,000} \times 100$$

$$= 50 \%$$

169. From the following information, calculate return on investment (or return on capital employed):

Particular

Share capital	5,00,000
Reserves and surplus	2,50,000
Net fixed Assets	22,50,000
Non-current Trade investment	2,50,000
Current Assets	11,00,000
10% Long-term Borrowings	20,00,000
Current Liabilities	8,50,000

Net profit before TAX: 6,00,000

Solution;

Interest = 10% of long-term Borrowings

$$= \frac{10}{100} \times 20,00,000$$

$$= 2,00,000$$

Net Profit Before interest & tax = Net profit before tax + interest

$$= 6,00,000 + 2,00,000$$

$$= 8,00,000$$

Capital employed = Share capital + Reserve & surplus + 10% long-term

Borrowings + Long-term provision

= 27,50,000

$$= \frac{8,00,000}{27,50,000} \times 100$$

Goods were sold at a profit of 25% on cost.

Solution:

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

$$2 = \frac{8,00,000}{\text{Current Liabilities}}$$

$$\text{Current Liabilities} = 4,00,000$$

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$1.5 = \frac{\text{Quick Assets}}{4,00,000}$$

$$\text{Quick Assets} = 6,00,000$$

$$\text{Quick Assets} = \text{Current Assets} - \text{Inventory}$$

$$6,00,000 = 8,00,000 - \text{Inventory}$$

$$\text{Inventory} = 2,00,000$$

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Avg.Inventory}}$$

$$6 = \frac{\text{Cost of Goods Sold}}{2,00,000}$$

$$\text{Cost of Goods sold} = 12,00,000$$

$$\text{Gross profit} = \text{Revenue from operation} - \text{cost of goods sold}$$

$$\frac{25}{100} \times 12,00,000 \text{ Revenue from operation} - 12,00,000$$

$$\text{Revenue from operation} = 12,00,000 + 3,00,000$$

$$= 15,00,000$$

172. Opening inventory 80,000; Purchase 4,30,900; Direct Expenses 4,000; closing inventory 1,60,000; Administrative Expenses 21,100; selling and distribution Expenses 40,000; Revenue form operations, i.e., Net sales 10,00,000. Calculate inventory turnover Ratio; Gross profit Ratio: and Operating Ratio.

Solution:

Case - 1

$$\begin{aligned}\text{Cost of Goods sold} &= \text{Opening inventory} + \text{Purchase} + \text{Direct Expenses} \\ &\quad - \text{Closing inventory} \\ &= 80,000 + 43,0900 + 4,000 - 1,60,000 \\ &= 3,54,900\end{aligned}$$

$$\begin{aligned}\text{Inventory Turnover Ratio} &= \frac{\text{Cost of Goods Sold}}{\text{Avg.Inventory}} \\ 6 &= \frac{3,54,900}{\frac{80,000+1,60,000}{2}} \\ &= \frac{3,54,900 \times 2}{2,40,000} \\ &= 2.96 \text{ times}\end{aligned}$$

Case - 2

$$\begin{aligned}\text{Gross profit} &= \text{Revenue from operation} - \text{Cost of Goods sold} \\ &= 10,00,000 - 3,54,900 \\ &= 6,45,100\end{aligned}$$

$$\begin{aligned}\text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{6,45,100}{10,00,000} \times 100 \\ &= 64.51 \%\end{aligned}$$

Case - 3

$$\begin{aligned}\text{Operating Ratio} &= \frac{\text{Cost of goods sold} + \text{Operating Expense}}{\text{Revenue from operation}} \times 100 \\ &= \frac{3,54,900 + 40,000 + 21,100}{41,00,000} \times 100 \\ &= \frac{4,16,000}{10,00,000} \times 100 \\ &= 41.6 \%\end{aligned}$$

173. Following information is given about a company:

Revenue from operation, i.e., Net sales	1,50,000
Gross Profit	30,000
Cost of Revenue form operations (Cost of goods Sold)	1,20,000
Opening inventory	29,000
Closing Inventory	31,000
Debtors	16,000

From the above information, Calculate following ratios:

- (i) Gross profit Ratio,
- (ii) Inventory turnover Ratio, and
- (iii) Trade Receivables Turnover Ratio.

Solution:

Case - 1

$$\begin{aligned}\text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{30,000}{1,50,000} \times 100 \\ &= 20 \%\end{aligned}$$

Case - 2

$$\begin{aligned}\text{Inventory Turnover Ratio} &= \frac{\text{Cost of Goods Sold}}{\text{Avg.Inventory}} \\ 6 &= \frac{1,20,000}{\frac{29,000+31,000}{2}} \\ &= \frac{1,20,000 \times 2}{60,000} \\ &= 4 \text{ times}\end{aligned}$$

Case - 3

$$\begin{aligned}\text{Trade receivables turnover ratio} &= \frac{\text{Net credit Sales}}{\text{Avg,trade receivables}} \\ &= \frac{1,50,000}{16,000} \\ &= 9.375\end{aligned}$$

174. From the following information, Calculate:

(i) Return on investment Ratio.

(ii) Net Assets Turnover Ratio.

Particulars	
Net profit after interest and Tax	2,40,000
Tax	1,60,000
Net Fixed Assets: Property, plant and Equipment and intangible Assets	10,00,000
Non-Current investment (Non-trade)	1,00,000
Equity share capital (Face value 10 per share)	5,00,000
15% preference share capital	1,00,000
Reserve and surplus (including surplus of the year consideration)	2,00,000
10% Debentures	4,00,000
Revenue from operations	24,00,000

$$\begin{aligned}\text{Interest} &= \text{10\% Debenture} \\ &= \frac{10}{100} \times 4,00,000 = 40,000\end{aligned}$$

$$\begin{aligned}\text{Net Profit Before interest \& tax} &= \text{Net profit after interest \& tax} + \text{tax} + \\ &\hspace{15em} \text{interest} \\ &= 2,40,000 + 1,60,000 + 40,000 \\ &= 4,40,000\end{aligned}$$

$$\begin{aligned}
 \text{Capital Employed} &= \text{Equity share capital} + 15\% \text{ preference share} \\
 &\quad \text{capital} + \text{reserves \& Surplus} + 10\% \text{ Debentures} \\
 &= 5,00,000 + 1,00,000 + 2,00,000 + 4,00,000 \\
 &= 12,00,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Return on Investment} &= \frac{\text{Profit Before Tax \& Interest}}{\text{Capital Employed}} \times 100 \\
 &= \frac{4,40,000}{12,00,000} \times 100 \\
 &= 36.67 \%
 \end{aligned}$$

$$\begin{aligned}
 \text{Net Assets Turnover Ratio} &= \frac{\text{Revenue from operation}}{\text{Capital Employed}} \\
 &= \frac{24,00,000}{12,00,000} \\
 &= 2 \text{ times}
 \end{aligned}$$

175. From the following information obtained from the books of kamal Ltd., calculate (i) Gross profit Ratio and (ii) Net profit Ratio:

Revenue from Operation	2,50,000
Purchases	1,05,000
Carriage inwards	4,000
Salaries	30,000
Decrease in inventory	15,000
Return outwards	5,000
Wages	18,000

Solution:

Case - 1

$$\begin{aligned}\text{Cost of Goods sold} &= \text{Purchase} - \text{Return outward} + \text{wages} + \text{Carriage} \\ &\quad \text{inwards} + \text{Decrease in inventory} \\ &= 1,05,000 - 5,000 + 18,000 + 4,000 + 15,000 \\ &= 1,37,000\end{aligned}$$

$$\begin{aligned}\text{Gross Profit} &= \text{Revenue from operation} - \text{cost of Goods sold} \\ &= 2,50,000 - 1,37,000 \\ &= 1,13,000\end{aligned}$$

$$\begin{aligned}\text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{1,13,000}{2,50,000} \times 100 \\ &= 45.20 \%\end{aligned}$$

Case - 2

$$\begin{aligned}\text{Net profit} &= \text{Gross profit} - \text{salaries} \\ &= 11,3,000 - 30,000 \\ &= 3,000\end{aligned}$$

$$\begin{aligned}\text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Revenue from operatoin}} \times 100 \\ &= \frac{83,000}{2,50,000} \times 100 \\ &= 33.20 \%\end{aligned}$$

176. Calculate following ratios on the basis of the following information:

(i) Gross profit Ratio; (ii) Current Ratio; (iii) Acid Test Ratio

(iv) Inventory Turnover Ratio.

Gross profit	50,000
Inventory	15,000
Cash and Cash Equivalents	17,500
Revenue from operations	1,00,000
Trade Receivables	27,500
Current Liabilities	40,000

Case - 1

$$\begin{aligned}\text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Revenue from operation}} \times 100 \\ &= \frac{50,000}{1,00,000} \times 100 \\ &= 50 \%\end{aligned}$$

Case - 2

**Current Assets = Inventory + Cash & cash Equivalents + Trade
receivables**

$$= 15,000 + 17,500 + 27,500$$

$$= 60,000$$

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

$$= \frac{60,000}{40,000} \times 100$$

$$= 1.5:1$$

Case - 3

Quick Assets = Current Assets - Inventory

$$= 60,000 - 15,000$$

$$= 45,000$$

Quick Ratio $= \frac{\text{Quick Assets}}{\text{Current Assets}}$

$$= \frac{45,000}{40,000} \times 100$$

$$= 1.125:1$$

Case - 4

Cost of goods sold = Revenue from operations - Gross profit

$$= 1,00,000 - 50,000$$

$$= 50,000$$

Inventory Turnover Ratio $= \frac{\text{Cost of Goods Sold}}{\text{Avg.Inventory}}$

$$= \frac{50,000 \times 2}{15,000}$$

$$= 3.33 \text{ times}$$

177. Calculate following ratios on the basis of the given information:

- (i) Current Ratio; (ii) Acid Test Ratio; (iii) Operating Ratio; and**
- (iv) Gross profit Ratio.**

Current Assets	3,50,000
Current Liabilities	1,75,000
Inventor	1,50,000
Revenue from operations (sales)	6,00,000
Operating Expenses	2,00,000
Cost of Revenue from operations	3,00,000

Solution:

$$\begin{aligned}
 \text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\
 &= \frac{3,50,000}{1,75,000} \times 100 \\
 &= 2:1
 \end{aligned}$$

Case - 2

$$\begin{aligned}
 \text{Acid Test Ratio} &= \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}} \\
 &= \frac{3,50,000 - 1,50,000}{1,75,000} \\
 &= \frac{2,00,000}{1,75,000} \\
 &= 1.4:1
 \end{aligned}$$

Case - 3

$$\begin{aligned}
 \text{Operating Ratio} &= \frac{\text{Cost of goods sold} + \text{Operating Expense}}{\text{Revenue from operatoin}} \times 100 \\
 &= \frac{3,00,000 + 2,00,000}{5,00,000} \times 100
 \end{aligned}$$

$$= \frac{5,00,000}{6,00,000} \times 100$$

$$= 83.33 \%$$

Case - 4

Gross Profit = Revenue from operation - cost of revenue from operation

$$= 6,00,000 - 3,00,000$$

$$= 3,00,000$$

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

$$= \frac{3,00,000}{6,00,000} \times 100$$

$$= 50 \%$$

178. From the information given below, calculate any three of the following ratios:

- | | |
|----------------------------|--------------------------------------|
| (i) Gross profit Ratio: | (ii) Working capital Turnover Ratio; |
| (iii) Debt to Equity Ratio | (iv) Proprietary Ratio |

Revenue from operations (Net sales)	5,00,000
Cost of Revenue operations (cost of goods sold)	3,00,000
Current Assets	2,00,000
Current Liabilities	1,40,000
Paid-up share capital	2,50,000
13% Debentures	1,00,000

Case - 1

Gross Profit = Revenue from operation - cost of revenue from operation

$$= 5,00,000 - 3,00,000$$

$$= 2,00,000$$

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

$$= 40 \%$$

Case - 2

Working Capital = Current Assets - Current Liabilities

$$= 2,00,000 - 1,40,000$$

$$= 60,000$$

$$\text{Working capital Ratio} = \frac{5,00,000}{60,000}$$

$$= 8.33 \text{ times}$$

Case - 3

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

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

$$= 0.4:1$$

Case - 4

Total Assets = paid-up share capital + 13% Debentures + Current

Liabilities

$$= 2,50,000 + 1,00,000 + 1,40,000$$

$$= 4,90,000$$

$$\text{Property Ratio} = \frac{\text{Share holders funds}}{\text{Total Assets}}$$

$$= \frac{2,50,000}{4,90,000}$$

$$= 51:1$$

179. On the basis of the following information, calculate

(i) Debt to Equity Ratio; (ii) Working capital Turnover Ratio.

Information:

Revenue from operations: (a) Cash sales	40,00,000
(b) Credit sales	20,00,000
Cost of Goods sold	35,00,000
Other current Assets	8,00,000
Current Liabilities	4,00,000
Paid-up share capital	17,00,000
6% Debentures	3,00,000
9% Loan from Bank	7,00,000
Debentures Redemption Reserve	3,00,000
Closing Inventory	1,00,000

Case - 1

Debt - 6% Debentures + 9% loan from Bank

$$= 3,00,000 + 7,00,000$$

$$= 10,00,000$$

Equity = paid-up capital + Debentures Redemption Reserve

$$= 17,00,000 + 3,00,000$$

$$= 20,00,000$$

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

$$= \frac{10,00,000}{20,00,000}$$

$$= 0.5:1$$

Case - 2

Revenue from operation = Cash sales + Credit sales

$$= 40,00,000 + 20,00,000$$

$$= 60,00,000$$

Current Assets = other current Assets + closing inventory

$$= 8,00,000 + 1,00,000$$

$$= 9,00,000$$

Working Capital = Current Assets - Current Liabilities

$$= 9,00,000 - 4,00,000$$

$$= 5,00,000$$

$$\text{Working capital Turnover Ratio} = \frac{\text{Turnover from operation}}{\text{working capital}}$$

$$= \frac{60,00,000}{5,00,000}$$

$$= 12 \text{ times}$$

180. From the following, calculate (a) Debt to equity ratio; (b) Total Assets to debt Ratio; and (c) proprietary Ratio:

Equity share capital	75,000
preference share capital	25,000
General Reserve	45,000
Balance in statements of profit & loss	30,000
Debentures	75,000
Trade payables	40,000
Outstanding Expense	10,000

Solution:

Case - 1

Equity = Equity share capital + preference share capital + General Reserve + Balance in statement of profit & loss

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

$$= 1,75,000$$

$$\begin{aligned}
 \text{Debt to Equity Ratio} &= \frac{\text{Debt}}{\text{Equity}} \\
 &= \frac{75,000}{1,75,000} \\
 &= 0.43:1
 \end{aligned}$$

Case - 2

$$\begin{aligned}
 \text{Total Assets to Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\
 &= \frac{3,00,000}{75,000} \\
 &= 4:1
 \end{aligned}$$

Case - 3

$$\begin{aligned}
 \text{Property Ratio} &= \frac{\text{Share holders funds}}{\text{Total Assets}} \\
 &= \frac{1,75,000}{3,00,000} \\
 &= 0.58:1
 \end{aligned}$$

181. From the following information related to Naveen Ltd., calculate
(a) Return on investment and (b) Total Assets to Debt Ratio:

Information: Fixed Assets 75,00,000; Current Assets 40,00,000;
Current liabilities 27,00,000; 12% Debenture 80,00,000 and Net
profit before interest, Tax and Dividend 14,50,000.

Solution:

$$\begin{aligned}
 \text{Capital Employed} &= \text{Fixed Assets} + \text{Current Assets} - \text{Current Liabilities} \\
 &= 75,00,000 + 40,00,000 - 27,00,000
 \end{aligned}$$

$$= 88,00,000$$

$$\begin{aligned}\text{Return on Investment} &= \frac{\text{Profit Before Int. Tax \& Dividend}}{\text{Capital Employed}} \times 100 \\ &= \frac{14,50,000}{88,00,000} \times 100 \\ &= 16.48 \%\end{aligned}$$

Case - 2

Total Assets = Fixed Assets + Current Assets

$$= 75,00,000 + 40,00,000$$

$$= 11,50,000$$

Debt = 12% Debentures

$$= 80,00,000$$

$$\begin{aligned}\text{Total Assets To Debt Ratio} &= \frac{\text{Total Assets}}{\text{Debt}} \\ &= \frac{11,50,000}{80,00,000} \\ &= 1.44:1\end{aligned}$$

182. From the following information, calculate:

- i. Gross Profit Ratio;
- ii. Working capital Turnover Ratio; and
- iii. Property Ratio

Particular	Amount	particular	Amount
Paid-up Capital	8,00,000	Current Assets	5,00,000

Credit sales	3,00,000	Current Liabilities	2,90,000
9% Debentures	3,40,000	Cash sales: 75% of Credit sales	
Cost of Goods sold	6,80,000	Net profit for the year	1,55,000

Solution:

Case - 1

Revenue from operation = cash sales + credit sales

$$= \frac{75}{100} \times 3,00,000 + 3,00,000$$

$$= 2,25,000 + 3,00,000$$

$$= 5,25,000$$

Gross profit = Revenue from operation - cost of goods sold

$$= 5,25,000 - 6,80,000$$

$$= - 1,55,000$$

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

$$= \frac{- 1,55,000}{5,25,000} \times 100$$

$$= - 29.52 \%$$

Case - 2

Working capital = Current Assets - Current Liabilities

$$= 5,00,000 - 2,90,000$$

$$= 2,10,000$$

Revenue from operation = 5,25,000

$$\begin{aligned}\text{Working capital Turnover Ratio} &= \frac{\text{Turnover from operation}}{\text{working capital}} \\ &= \frac{5,25,000}{2,10,000} \\ &= 2.5 \text{ times}\end{aligned}$$

Case - 3

$$\begin{aligned}\text{Proprietors Funds} &= \text{Paid up capital} + \text{Net Profit for the year} \\ &= 8,00,000 + 1,55,000 \\ &= 9,55,000\end{aligned}$$

$$\begin{aligned}\text{Total Assets} &= \text{Paid-up Capital} + \text{Net Profit for the year} + 9\% \\ &\quad \text{Debentures} + \text{Current Liabilities} \\ &= 8,00,000 + 1,55,000 + 3,40,000 + 2,90,000 \\ &= 15,85,000\end{aligned}$$

$$\begin{aligned}\text{Property Ratio} &= \frac{\text{Property funds}}{\text{Total Assets}} \\ &= \frac{9,55,000}{15,85,000} \times 100 \\ &= 60.25 \%\end{aligned}$$

