



# INDIAN SCHOOL AL WADI AL KABIR

<b>Class: XII</b>	<b>Department: Commerce</b>	<b>Date of submission:</b>
<b>Worksheet No: 3</b>	<b>Topic: Ratio Analysis</b>	<b>12/05/2020</b>

## MCQs

1. What does the ratio of current assets/current liabilities show?

A. Asset usage B. **Liquidity** C. Profitability D. Return of capital employed.

2. Generally accepted standard current ratio is

A. 1:1 B. 5:1 C. **2:1** D. 0.5:1

3. The quick ratio is 1.5:1. A payment of advance rent of Rs.5,000 would:

A. Increase the ratio

B. **Decrease the ratio**

C. Not change the ratio

D. None of the above.

4. X Ltd. has current ratio 3.5:1 and quick ratio 2:1. The inventories are Rs.24,000. Current Assets will be:

A. 50,000 B. 48,000 C. 65,000 D. **56,000.**

5. Shareholders fund-Rs.1,60,000; Total debt- Rs.3,60,000; Current Liabilities- Rs.40,000. The Total assets to debt ratios is

A. **1.62:1** B. 4:1 C. 2.25:1 D. 1.3:1

6. If the Operating ratio is 76.42% then the operating profit ratio is

A. 25.6% B. 26.24% C. **23.58%** D. 24.76%

7. Net profit before tax but after interest is Rs.2,40,000. 15% Long Term debt 4,00,000.

Tax Rs.50,000. Shareholders fund-8,00,000

The ROI and ICR will be

ROI	ICR
A. 20%	4 times
B. 75%	5 times
C. 30%	3 times
<b>D. 25%</b>	<b>5 times</b>

8. Revenue from operation Rs.16,00,000. Gross Loss ratio 5%; Average Inventory Rs.2,20,000. The Inventory Turnover ratio is

A. 7.5 Times    B. 8 times    **C. 7.64 times**    D. 7 times

9. The following groups of ratios are primarily measure risk:

A. liquidity, activity, and profitability    B. liquidity, activity, and inventory    C. liquidity, activity, and debt    **D. liquidity, debt and profitability**

10. The \_\_\_\_\_ ratios are primarily measures of return:

A. liquidity    B. activity    C. debt    **D. profitability**

11. The \_\_\_\_\_ of business firm is measured by its ability to satisfy its short term obligations as they become due:

A. activity    B. **liquidity**    C. debt    D. profitability

12. \_\_\_\_\_ ratios are a measure of the speed with which various accounts are converted into revenue from operations or cash:

**A. activity**    B. liquidity    C. debt    D. profitability

13. The two basic measures of liquidity are:

A. inventory turnover and current ratio    B. **current ratio and liquid ratio**    C. gross profit margin and operating ratio.    D. current ratio and average collection period

14. The \_\_\_\_\_ is a measure of liquidity which excludes \_\_\_\_\_, generally the least liquid asset:

A. current ratio, trade receivable    B. liquid ratio, trade receivable    C. current ratio, inventory

**D. liquid ratio, inventory**

15. The \_\_\_\_\_ measures the activity of a firm's inventory.

A. trade receivables turnover    **B. inventory turnover**    C. liquid ratio

D. current ratio

16. State which of the following will lead to no change in Current Ratio when it is 1:1

- (a) Cash paid to creditors (b) Bills payable discharged (c) **Purchased goods for cash** (d) All the above

17. From the following data calculate Current Liabilities:

Liquid Assets Rs. 37,500, Inventories Rs. 10,000, Prepaid Expenses Rs. 2,500, Working Capital Rs. 30,000

- (a) Rs. 40,000 (b) **Rs. 20,000** (c) Rs. 30,000 (d) Rs. 50,000

18. Which of the following ratio shows relationship between total assets and long term debts of the enterprise?

- (a) Debt Equity ratio (b) Proprietary ratio (c) **Total Assets to Debt Ratio** (d) Interest Coverage Ratio

19. If the Operating Profit Ratio is 25%, Operating Ratio is -----

- (a) 50% (b) **75%** (c) 100% (d) 25%

20. A company has earned Rs. 5,00,000 as profit before interest and tax. Its Return on Investment is 20%. State the Capital Employed in the company

- (a) 10,00,000 (b) 15,00,000 (c) 20,00,000 (d) **25,00,000**

21. From the following calculate Total Assets to Debt Ratio

Shareholder's Funds Rs. 14,00,000, Total Debts Rs. 18,00,000, Current Liabilities Rs. 2,00,000

- (a) 1:1 (b) **2:1** (c) 0.5:1 (d) 3:1

22. From the following calculate Working Capital Turnover Ratio:

Revenue from operations Rs.12,00,000, Current Assets Rs. 5,00,000, Total Assets Rs. 8,00,000

Non-current liabilities Rs. 4,00,000 and Shareholder's Funds Rs. 2,00,000

- (a) 3 times (b) **4 times** (c) 5 times (d) 6 times

### BOARD QUESTIONS FOR 3 MARKS

1. Calculate current ratio acid test ratio from the following information:

LIABILITIES	AMT	ASSETS	AMT
Creditors	60,000	Stock	50,000
Bills Payable	40,000	Cash	30,000
Bank Overdraft	4,000	Debtors	40,000
		Bills Receivable	10,000
		Advance Tax	4,000

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

$$\text{CA} = \text{Stock} + \text{Cash} + \text{Debtors} + \text{Bills Receivable} + \text{Advance Tax}$$

$$= 50,000 + 30,000 + 40,000 + 10,000 + 4,000 = 1,34,000$$

$$\text{CL} = \text{B/p} + \text{Crds} + \text{Bank Overdraft}$$

$$= 40,000 + 60,000 + 4,000 = 1,04,000$$

$$\text{CR} = \frac{1,34,000}{1,04,000} = 1.29:1$$

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

$$\text{QA} = \text{CA} - \text{Stock} - \text{Advance Tax}$$

$$= 1,34,000 - 50,000 - 4,000 = 80,000$$

$$\text{QR} = \frac{80,000}{1,04,000} = 0.77:1$$

2. Calculate 'Liquid Ratio' from the following information:

Current Liabilities Rs. 50,000

Current Assets Rs. 80,000

Stock Rs. 25,000

Prepaid Expenses Rs. 5,000

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

$$\text{QA} = \text{CA} - \text{Stock} - \text{Prepaid expenses}$$

$$= 80,000 - 25,000 - 5,000 = 50,000$$

$$\text{CL} = 50,000$$

$$\text{QR} = \frac{50,000}{50,000} = 1:1$$

3. X Ltd. has a current ratio of 3.5:1 and quick ratio of 2:1. If excess of current assets over quick assets represented by stock is Rs. 24,000, calculate current assets and current liabilities.

$$\text{CR} = \frac{\text{CA}}{\text{CL}} = \frac{3.5}{1}$$

$$\text{CA} = 3.5 \text{ CL}$$

$$\text{QR} = \frac{\text{QA}}{\text{CL}} = \frac{2}{1}$$

$$\text{QA} = \text{CA} - \text{STOCK}$$

$$= 3.5 \text{ CL} - 24,000$$

$$\text{QR} = \frac{3.5\text{CL} - 24,000}{\text{CL}} = \frac{2}{1}$$

$$= 3.5\text{CL} - 24,000 = 2\text{CL}$$

$$3.5\text{CL} - 2\text{CL} = 24,000$$

$$1.5 \text{ CL} = 24,000$$

$$\text{CL} = 16,000$$

$$\text{CA} = 3.5\text{CL}$$

$$= 3.5 \times 16,000$$

$$= 56,000$$

**CA = Rs. 56,000**  
**CL = Rs. 16,000**

4. Calculate the current ratio from the following information :

Total Assets Rs.3,00,000 Fixed Assets Rs.1,60,000  
 Long-term Liabilities Rs.80,000 Investments Rs.1,00,000  
 Shareholders Fund Rs.2,00,000 Fictitious Assets Nil

**Current Ratio = CA/CL**

$$CA = TA - FA - INVESTMENTS$$

$$= 3,00,000 - 1,60,000 - 1,00,000$$

$$= 40,000$$

**TOTAL ASSETS = TOTAL LIABILITIES ( NCL + CL )+ SHF**

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

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

$$CL = 20,000$$

$$CR = 40,000 / 20,000 = 2:1$$

5. The current ratio is 2:1. State giving reasons which of the following transactions would improve, reduce and not change the current ratio:

- Repayment of current liability;
- Purchased goods on credit;
- Sale of an office typewriter (Book value – Rs. 4,000) for Rs. 3,000 only;
- Sale of merchandise (goods) costing Rs. 10,000 for Rs. 11,000;
- Payment of dividend

**In such situations let us assume CA & CL with imaginary values in order to arrive at better conclusions.**

**Let CA be 2,00,000, CL be 1,00,000 and the amount of increase or decrease be 50,000 until and unless specified.**

$$(a) \frac{CA}{CL} = \frac{2,00,000 - 50,000}{1,00,000 - 50,000} = \frac{1,50,000}{50,000} = 3 : 1$$

**Ratio improves**

$$(b) \frac{CA}{CL} = \frac{2,00,000 + 50,000}{1,00,000 + 50,000} = \frac{2,50,000}{1,50,000} = 1.67 : 1$$

**Ratio declines/reduces**

$$(c) \frac{CA}{CL} = \frac{2,00,000 + 3,000}{1,00,000} = \frac{2,03,000}{1,00,000} = 2.03 : 1$$

**Ratio improves**

$$(d) \frac{CA}{CL} = \frac{2,00,000 - 10,000 + 11,000}{1,00,000} = \frac{2,01,000}{1,00,000} = 2.01 : 1$$

**Ratio improves**

$$(e) \frac{CA}{CL} = \frac{2,00,000 - 50,000}{1,00,000 - 50,000} = \frac{1,50,000}{50,000} = 3 : 1$$

**Ratio improves**

6. From the following information calculate Current Ratio and Liquid Ratio

Equity Share Capital	24,000	Buildings	45,000
8% Debentures	9,000	Stock	12,000
Bank Overdraft	6,000	Debtors	9,000
Creditor	23,400	Cash in Hand	2,280
Provision for Taxation	600	Prepaid Expenses	720
Profit and Loss	6,000		

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

**CA = Stock + Debtors + Cash in hand + Prepaid expenses**  
**= 12,000 + 9,000 + 2,280 + 720 = 24,000**

**CL = Bank Overdraft + Creditors + Provision for tax**  
**= 6,000 + 23,400 + 600 = 30,000**

**CR =  $\frac{24,000}{30,000} = 0.8:1$**

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

**QA = Current Assets – Stock – Prepaid Expenses**  
**= 24,000 – 12,000 – 720 = 11,280**

**QR =  $\frac{11,280}{30,000} = 0.38:1$**

7. Current Ratio is 3.5:1. Working Capital is Rs. 9,00,000. Calculate the amount of Current Assets and Current Liabilities.

**CR =  $\frac{\text{CA}}{\text{CL}} = 3.5$**

**CA = 3.5 CL**

**WC = CA – CL = 9,00,000**  
**= 3.5 CL – CL = 9,00,000**  
**= 2.5 CL = 9,00,000**  
**CL = 9,00,000/2.5**  
**CL = 3,60,000**

**CA = 3.5 CL**  
**CA = 3.5 X 3,60,000**  
**CA = 12,60,000**

**VERIFY:**

**WC = 9,00,000**  
**CA – CL = 9,00,000**  
**12,60,000 – 3,60,000 = 9,00,000**

8. Shine Limited has a current ratio 4.5:1 and quick ratio 3:1; if the stock is 36,000, calculate current liabilities and current assets.

**CR =  $\frac{\text{CA}}{\text{CL}} = 4.5$**

**CA = 4.5 CL**

**QR =  $\frac{\text{QA}}{\text{CL}} = 3$**

$$\begin{aligned}
 & \text{CL} = 1 \\
 \text{QA} &= \text{CA} - \text{STOCK} \\
 &= 4.5 \text{ CL} - 36,000 \\
 \text{QR} &= \frac{4.5\text{CL} - 36,000}{\text{CL}} = \frac{3}{1} \\
 &= 4.5\text{CL} - 36,000 = 3\text{CL}
 \end{aligned}$$

$$\begin{aligned}
 4.5\text{CL} - 3\text{CL} &= 36,000 \\
 1.5 \text{ CL} &= 36,000 \\
 \text{CL} &= 36,000/1.5 = 24,000 \\
 \text{CA} &= 4.5 \text{ CL} \\
 &= 4.5 \times 24,000 \\
 &= 1,08,000 \\
 \text{CA} &= \text{Rs. } 1,08,000 \\
 \text{CL} &= \text{Rs. } 24,000
 \end{aligned}$$

9. The ratio of Current Assets (Rs. 3,00,000) to Current Liabilities (Rs. 2,00,000) is 1.5:1. The accountant of this firm is interested in maintaining a Current Ratio of 2:1 by paying some part of current liabilities. You are required to suggest him the amount of Current Liabilities which must be paid for this purpose.

**Let the amount of current liability to be paid be x**

**In this case CA and CL will decrease by x**

$$\begin{aligned}
 \text{CR} &= \text{CA}/\text{CL} = 2/1 \\
 &= \frac{3,00,000 - x}{2,00,000 - x} = \frac{2}{1}
 \end{aligned}$$

$$1(3,00,000 - x) = 2(2,00,000 - x)$$

$$3,00,000 - x = 4,00,000 - 2x$$

$$3,00,000 - 4,00,000 = -2x + x$$

$$-1,00,000 = -1x$$

$$X = 1,00,000$$

**Current liability to be paid off is Rs. 1,00,000**

**Verify:**

$$\begin{aligned}
 & \frac{3,00,000 - 1,00,000}{2,00,000 - 1,00,000} \\
 &= \frac{2,00,000}{1,00,000} \\
 &= 2:1
 \end{aligned}$$

10. A firm had Current Liabilities of Rs. 90,000. It then acquired Stock-in-trade at a cost of Rs. 10,000 on credit. After this acquisition, the Current Ratio was 2:1. Determine the size of the Current Assets and Working Capital after and before the inventories was acquired.

**Let the Current Assets after purchase of stock in trade be x**

**This increases the current asset as well as current liability by the same amount**

$$\begin{aligned}
 \text{CR} &= \text{CA} / \text{CL} = 2:1 \\
 &= \frac{x}{90,000 + 10,000} = \frac{2}{1} \\
 &= \frac{x}{1,00,000} = \frac{2}{1} \\
 X &= 2,00,000
 \end{aligned}$$

**Current Assets after purchase of stock in trade is Rs. 2,00,000**  
**Current Assets before purchase of stock in trade is 2,00,000 -10,000 = Rs. 1,90,000**  
**Current Liabilities before purchase of stock in trade is Rs. 90,000**  
**Current Liabilities after purchase of stock in trade is Rs. 90,000 +10,000 = Rs. 1,00,000**  
**Working capital before purchase of stock in trade = 1,90,000 – 90,000 = Rs. 1,00,00**  
**Working capital after purchase of stock in trade = 2,00,000 – 1,00,000 = Rs. 1,00,00**

11. The Quick Ratio of a company is 2:1. State, giving reason, which of the following would improve, reduce or not change the ratio:

(i) Purchase of Stock in trade for cash (ii) Cash collected from trade receivables (iii) Sale of stock in trade (costing Rs. 10,000) for Rs. 11,000 and (iv) Sale of an old furniture (Book value Rs. 10,000) for Rs. 9,000 (v) Payment of Dividend.

In such situations let us assume QA & CL with imaginary values in order to arrive at better conclusions.

Let QA be 2,00,000, CL be 1,00,000 and the amount of increase or decrease be 50,000 until and unless specified.

$$(a) \frac{\text{QA}}{\text{CL}} = \frac{2,00,000 - 50,000}{1,00,000} = \frac{1,50,000}{1,00,000} = 1.5 : 1$$

Ratio declines / reduces

$$(b) \frac{\text{QA}}{\text{CL}} = \frac{2,00,000 + 50,000 - 50,000}{1,00,000} = \frac{2,00,000}{1,00,000} = 2 : 1$$

Ratio does not change

$$(c) \frac{\text{QA}}{\text{CL}} = \frac{2,00,000 + 11,000}{1,00,000} = \frac{2,11,000}{1,00,000} = 2.11 : 1$$

Ratio improves

$$(d) \frac{\text{QA}}{\text{CL}} = \frac{2,00,000 + 9,000}{1,00,000} = \frac{2,09,000}{1,00,000} = 2.09 : 1$$

Ratio improves

$$(e) \frac{\text{QA}}{\text{CL}} = \frac{2,00,000 - 50,000}{1,00,000 - 50,000} = \frac{1,50,000}{50,000} = 3 : 1$$

Ratio improves

12. Calculate Debt Equity Ratio, from the following information :

Total external liabilities Rs.5,00,000 , Balance Sheet Total Rs.10,10,000, Current liabilities Rs.1,00,000 Fictitious Assets Rs.10,000

**DER = DEBT /EQUITY**

**DEBT = TOTAL LIABILITIES – CURRENT LIABILITIES**  
**= 5,00,000 -1,00,000 = 4,00,000**

**EQUITY = TOTAL ASSETS – TOTAL LIABILITIES**  
**= 10,00,000 – 5,00,000 = 5,00,000**



$$\text{DER} = 4,00,000 / 5,00,000 = 0.8:1$$

12. From the following information, calculate Debt Equity Ratio, Proprietary Ratio and Ratio of Total Assets to Debt.

Preference Share Capital	1,00,000	Fixed Assets	4,00,000
Equity Share Capital	3,00,000	Investments	1,00,000
Reserves and Surplus	1,10,000	Current Assets	2,00,000
Secured Loans	1,50,000	Preliminary Expenses	10,000
Current liabilities	50,000		

$$\text{DEBT} = 1,50,000$$

$$\begin{aligned} \text{EQUITY} &= \text{PREF SH CAP} + \text{EQUITY SH CAP} + \text{RESERVES \& SURP} \\ &= 1,00,000 + 3,00,000 + 1,10,000 = 5,10,000 \end{aligned}$$

$$\begin{aligned} \text{TOTAL ASSETS} &= \text{FA} + \text{INV} + \text{CA} \\ &= 4,00,000 + 1,00,000 + 2,00,000 = 7,00,000 \end{aligned}$$

$$\text{DER} = \text{DEBT} / \text{EQUITY} = 1,50,000 / 5,10,000 = 0.29:1$$

$$\text{PR} = \text{PF (EQUITY)} / \text{TOTAL ASSETS} = 5,10,000 / 7,00,000 = 0.73:1$$

$$\text{TADR} = \text{TA} / \text{DEBT} = 7,00,000 / 1,50,000 = 4.67:1$$

13. The debt equity ratio of X Ltd. is 1:2. Which of the following would increase/decrease or not change the debt equity ratio?

- (i) Further issue of equity shares
- (ii) Cash received from debtors
- (iii) Sale of goods on cash basis
- (iv) Redemption of debentures
- (v) Purchase of goods on credit.

**In such situations let us assume DEBT & EQUITY with imaginary values in order to arrive at better conclusions.**

**Let DEBT be 1,00,000, EQUITY be 2,00,000 and the amount of increase or decrease be 50,000 until and unless specified.**

$$\text{(a) } \frac{\text{DEBT}}{\text{EQUITY}} = \frac{1,00,000}{2,00,000 + 50,000} = \frac{1,00,000}{2,50,000} = 0.4 : 1$$

**Ratio declines / reduces**

**(b) Ratio does not change**

**(c) Ratio does not change**

**(d) Ratio does not change**

**(e) Ratio does not change**

14. Calculate debt equity ratio from the following information:

Total Assets Rs. 15,00,000

Current Liabilities Rs. 6,00,000

Total Debts Rs. 12,00,000

$$\text{DER} = \text{DEBT} / \text{EQUITY}$$

$$\begin{aligned} \text{DEBT} &= \text{TOTAL DEBTS} - \text{CURRENT LIABILITIES} \\ &= 12,00,000 - 6,00,000 = 6,00,000 \end{aligned}$$

$$\text{EQUITY} = \text{TOTAL ASSETS} - \text{TOTAL LIABILITIES}$$

$$= 15,00,000 - 12,00,000 = 3,00,000$$

$$\text{DER} = 6,00,000 / 3,00,000 = 2:1$$

15. From the following details, calculate interest coverage ratio:  
Net Profit after tax Rs. 60,000; 15% Long-term Debt 10,00,000; and Tax Rate: 40%.

$$\text{ICR} = \frac{\text{PROFIT BEFORE INTEREST AND TAX}}{\text{INTEREST ON LONG TERM DEBT}}$$

$$\text{Tax} = \frac{\text{profit after tax} \times \text{rate}}{100 - \text{rate}}$$

$$= 60,000 \times \frac{40}{60} = 40,000$$

$$\text{INTEREST ON LTD} = 10,00,000 \times \frac{15}{100} = 1,50,000$$

$$\begin{aligned} \text{Profit before tax} &= \text{Profit after tax} + \text{tax} + \text{interest on LTB} \\ &= 60,000 + 40,000 + 1,50,000 \\ &= 2,50,000 \end{aligned}$$

$$\text{ICR} = 2,50,000 / 1,50,000 = 1.67 \text{ TIMES}$$

16. From the following information, calculate stock turnover ratio :  
Opening Stock Rs. 18,000 Wages Rs. 14,000, Closing Stock Rs. 22,000 Sales Rs. 80,000  
Purchases Rs. 46,000 Carriage Inwards Rs. 4,000

$$\text{ANS. Stock turnover Ratio} = \text{CRFO} / \text{AVG INVENTORY}$$

$$\text{CRFO} = 18,000 + 46,000 + 14,000 + 4,000 - 22,000 = 60,000$$

$$\text{AVG. STOCK} = \frac{18,000 + 22,000}{2} = 20,000$$

$$\text{ITR} = 60,000 / 20,000 = 3 \text{ TIMES}$$

17. From the following information, calculate stock turnover ratio. Sales: Rs. 4,00,000, Average Stock : Rs. 55,000, Gross Loss Ratio : 10%

$$\text{ANS. CRFO} = 4,00,000 + 4,00,000 \times \frac{10}{100} = 4,40,000$$

$$\text{ITR} = 4,40,000 / 55,000 = 8 \text{ TIMES}$$

18. A trader carries an average stock of Rs. 40,000. His stock turnover is 8 times. If he sells goods at profit of 20% on sales. Find out the profit.

$$\text{ANS. ITR} = \text{CRFO} / \text{AVG Inventory}$$

$$\text{ITR} = 8 \text{ TIMES}$$

$$= \text{CRFO} / 40,000 = 8$$

$$\text{CRFO} = 8 \times 40,000 = 3,20,000$$

$$\text{GP} = 20\% \text{ ON SALES} = \frac{1}{5} \text{ ON SALES} = \frac{1}{4} \text{ ON COST}$$

$$\text{i.e } \frac{1}{4} \times 3,20,000 = 80,000$$

19. Opening Inventory Rs. 29,000, Closing Inventory Rs. 31,000, Revenue from operations Rs. 3,00,000, Gross Profit 25% on Cost. Calculate Inventory Turnover Ratio.

$$\text{ANS. ITR} = \text{CRFO} / \text{AVG INVENTORY}$$

$$\text{G.P} = 25\% \text{ ON COST} = \frac{1}{4} \text{ ON COST} = \frac{1}{5} \text{ ON RFO}$$

$$= \frac{1}{5} \times 3,00,000 = 60,000$$

$$\text{CRFO} = \text{RFO} - \text{GP} = 3,00,000 - 60,000 = 2,40,000$$

$$\text{AVG INVENTORY} = \frac{29,000 + 31,000}{2} = 30,000$$

$$\text{ITR} = 2,40,000 / 30,000 = 8 \text{ TIMES}$$

20. Opening Inventory Rs. 19,000, Purchases Rs. 1,52,000, Revenue from operations Rs. 2,00,000, Gross Profit 25% on Revenue from operations. Calculate Inventory Turnover Ratio.

$$\text{ANS. GP} = 25/100 \times 2,00,000 = 50,000$$

$$\text{CRFO} = 2,00,000 - 50,000 = 1,50,000$$

$$19,000 + 1,52,000 - \text{CL. INVENTORY} = 1,50,000$$

$$\text{CL. INVENTORY} = 19,000 + 1,52,000 - 1,50,000 = 21,000$$

$$\text{ITR} = 1,50,000 / (19,000 + 21,000) / 2 = 15 \text{ TIMES}$$

21. Calculate current ratio of a company from the following information:

Stock turnover ratio = 4 times

Stock at the end is Rs. 20,000 more than the stock in the beginning.

Sales Rs. 3,00,000 and gross profit ratio is 20% of sales.

Current liabilities = Rs. 40,000 Quick ratio = 0.75

$$\text{ANS. GP} = 3,00,000 \times 20/100 = 60,000$$

$$\text{CRFO} = 3,00,000 - 60,000 = 2,40,000$$

$$\text{STR} = 2,40,000 / \text{AVG STOCK} = 4$$

$$\text{AVG. STOCK} = 2,40,000 / 4 = 60,000$$

LET 'X' BE THE OP. INVENTORY

THEN X+20,000 IS THE CL. INVENTORY

$$X + X + 20,000 / 2 = 60,000$$

$$2X + 20,000 = 2 \times 60,000$$

$$2X = 60,000 \times 2 - 20,000 = 1,00,000$$

$$X = \text{OP. INVENTORY} = 50,000$$

$$\text{CL. INVENTORY} = X + 20,000 = 70,000$$

$$\text{Q.R.} = .75 = \text{Q.A.} / \text{CL}$$

$$\text{Q.A.} = .75 \times 40,000 = 30,000$$

$$\text{CA} = \text{Q.A.} + \text{STOCK} = 30,000 + 70,000 = 1,00,000$$

$$\text{C.R.} = \text{CA} / \text{CL} = 1,00,000 / 40,000 = 2.5:1$$

22. Calculate the trade receivables turnover ratio from the following information:

Total RFO = Rs. 4,00,000

Cash RFO = 20% of total RFO

Debtors on 1.1.2019 = Rs. 40,000

Debtors on 31.12.2019 = Rs. 1,20,000

$$\text{ANS. CREDIT RFO} = 80/100 \times 4,00,000 = 3,20,000$$

$$\text{TRTR} = 3,20,000 / (40,000 + 1,20,000) / 2 = 4 \text{ TIMES}$$

23. From the following information, calculate –

(i) Debtors Turnover Ratio

(ii) Payable Turnover Ratio

RFO Rs. 8,75,000

Creditors Rs. 90,000

Bills Receivable Rs. 48,000

Bills Payable Rs. 52,000

Purchases Rs. 4,20,000

Debtors Rs. 59,000

$$\text{ANS. RFO Rs. 8,75,000 Creditors Rs. 90,000 Bills Receivable Rs. 48,000 Bills Payable Rs. 52,000}$$

Purchases Rs. 4,20,000 Debtors Rs. 59,000

$$\text{DTR} = \text{NET CREDIT RFO} / \text{AVG. TRADE RECEIVABLES} = 8,75,000 / (48,000 + 59,000) / 2 = 8,75,000 / 1,07,000 = 8.177$$

$$\text{PTR} = \text{NET CREDIT PURCHASES} / \text{AVG. TRADE PAYABLES} = 4,20,000 / (90,000 + 52,000) / 2 = 4,20,000 / 1,42,000 = 2.96$$

24. Given the following information calculate all profitability ratios:

RFO 3,40,000, Cost of Goods Sold 1,20,000, Selling expenses 80,000, Administrative Expenses 40,000, Interest on debentures 20,000, Gain on sale of asset 10,000, Trading commission received 25,000.

**Operating Ratio = Operating Cost / RFO x 100 =  $\frac{1,20,000 + 80,000 + 40,000}{3,40,000} \times 100 = \frac{2,40,000}{3,40,000} \times 100 = 70.58\%$**

**Operating Profit Ratio = Op.Pft / RFO x 100 =  $\frac{3,40,000 - 2,40,000}{3,40,000} \times 100 = 29.41\%$**

**Gross Profit Ratio = GP / RFO x 100 =  $\frac{2,20,000}{3,40,000} \times 100 = 64.70\%$**

**Net Profit Ratio = Net Profit / RFO x 100 =  $\frac{2,20,000 - 80,000 - 40,000 - 20,000 + 10,000 + 25,000}{3,40,000} \times 100 = 33.82\%$**

25. (a) What is meant by 'Profitability' of business?

**Efficiency in business is measured by profitability. Profitability refers to financial performance of the business**

(b) From the following details obtained from the financial statements of JN Ltd., calculate Interest Coverage Ratio:

Net Profit after Tax Rs. 2,00,000, 12% Long Term Debt Rs. 40,00,000, Rate of Tax 40%

**ICR =  $\frac{\text{PROFIT BEFORE INTEREST AND TAX}}{\text{INTEREST ON LONG TERM DEBT}}$**

**Tax = profit after tax x  $\frac{\text{rate}}{100 - \text{rate}}$**

**=  $2,00,000 \times \frac{40}{60} = 1,33,333$**

**INTEREST ON LTD =  $40,00,000 \times \frac{12}{100} = 4,80,000$**

**Profit before tax = Profit after tax + tax + interest on LTB**

**=  $2,00,000 + 1,33,333 + 4,80,000$**

**=  $8,13,333$**

**ICR =  $\frac{8,13,333}{4,80,000} = 1.69 \text{ TIMES}$**

26. Net profit after Interest but before Tax Rs. 1,40,000, 15% Long Term Debt Rs. 4,00,000, Share holder's funds Rs. 2,40,000, Tax Rate : 50%. Calculate Return on Capital Employed & ICR

**ANS. NET PROFIT BEFORE INTEREST AND TAX =  $1,40,000 + 4,00,000 \times \frac{15}{100} = 2,00,000$**

**CAPITAL EMPLOYED = S.H.F + NCL =  $2,40,000 + 4,00,000 = 6,40,000$**

**ROI =  $\frac{2,00,000}{6,40,000} \times 100 = 31.25\%$**

27. From the following information related to Naveen Ltd., Calculate (a) Return on Investment and

(b) Total Assets to Debt Ratio

Information : Fixed Assets Rs. 75,00,000, Current Assets Rs. 40,00,000, Current Liabilities Rs. 27,00,000, 12% Debentures Rs. 80,00,000 and Net Profit before Interest, Tax and Dividend Rs. 14,50,000

**(a) ANS. CAPITAL EMPLOYED =  $75,00,000 + 40,00,000 - 27,00,000 = 88,00,000$**

**ROI =  $\frac{14,50,000}{88,00,000} \times 100 = 16.48\%$**

**(b) TADR = Total Assets / Debt**

$$\begin{aligned}\text{Total Assets} &= \text{NCA(FA)} + \text{CA} \\ &= 75,00,000 + 40,00,000 \\ &= 1,15,00,000\end{aligned}$$

$$\text{Debt} = 80,00,000$$

$$\begin{aligned}\text{TADR} &= 1,15,00,000/80,00,000 \\ &= 1.44 : 1\end{aligned}$$

28. From the following information calculate Return on Investment & ICR

Net profit after interest and tax Rs. 8,00,000, 10% debentures Rs. 9,00,000, Tax @ 50%, Capital Employed Rs. 2,00,00,000

$$\text{ANS. TAX} = 8,00,000 \times 50/100 = 8,00,000$$

$$\text{INTEREST} = 9,00,000 \times 10/100 = 90,000$$

$$\text{NPBIT} = 8,00,000 + 8,00,000 + 90,000 = 16,90,000$$

$$\text{ROI} = 16,90,000 / 2,00,00,000 \times 100 = 8.45\%$$

**ICR = PROFIT BEFORE INTEREST AND TAX  
INTEREST ON LONG TERM DEBT**

$$\text{Tax} = \frac{\text{profit after tax} \times \text{rate}}{100 - \text{rate}}$$

$$= 8,00,000 \times 50/50 = 8,00,000$$

$$\text{INTEREST ON LTD} = 9,00,000 \times 10/100 = 90,000$$

$$\begin{aligned}\text{Profit before tax} &= \text{Profit after tax} + \text{tax} + \text{interest on LTB} \\ &= 8,00,000 + 8,00,000 + 90,000 \\ &= 16,90,000\end{aligned}$$

$$\text{ICR} = 16,90,000 / 90,000 = 18.78 \text{ TIMES}$$