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CLASS X · INTRODUCTION TO FINANCIAL MARKETS (405) · SKILL SUBJECT · CBSE BOARD EXAMINATION 2027

PART B · UNIT 10

Ratio Analysis

Unit Booklet · Short Notes · Board-Pattern Questions · Model Answers

Part B · 2 of 40 theory marks | 23 questions with model answers | Manish Mathur Sir | Taught: Sat 28 Nov (with Unit 9)

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STUDENT DETAILS

NAME _____

CLASS & SECTION _____

ROLL NO. _____

UNIT FINISHED ON _____

OBJECTIVE SELF-CHECK _____ / 13

1

READ THIS FIRST · SHORT NOTES

Unit Notes

What ratio analysis is and why it is used, then the three groups of ratios – liquidity, leverage (capital structure) and profitability – each with its formula, a worked sum on one company and what a high or low value means.

THIS UNIT IN THE BOARD PAPER

2 / 40

Unit 10 carries **2 marks**. In the CBSE sample paper it gave **1 one-mark item** (average collection period) and a **2-mark** question on liquidity and the current ratio. Short ratio sums are common.

SYLLABUS 2026–27 · WHAT CBSE LISTS FOR THIS UNIT

- Liquidity ratios: current ratio, acid-test ratio, turnover ratio, average collection period
- Leverage / capital structure ratios: debt-equity, debt to total assets, interest coverage
- Profitability ratios: gross profit, net profit, return on total assets, return on capital employed, return on shareholders' equity

HOW THE CBSE SKILL-SUBJECT PAPER IS SET (THEORY 50 MARKS · 2 HOURS)

1 mark
Objective: MCQ, assertion–reason, fill in the blank, true/false, match. Q1 is Part A; Q2–Q5 (answer 5 of 6 in each) are Part B.

2 marks
Short answer in **20–30 words**: two clear points. Part B: answer any 4 of 6 (Q11–Q16).

4 marks
Long answer in **50–80 words**: four points, or 2 + 2. Answer any 3 of 5 (Q17–Q21); often case-based.

Part B = 40
Objective 20 + short 8 + long 12. Part A (Employability Skills) = 10. Practical = 50.

Write in points, start each point with the key word, and stay inside the word limit. Objective answers: write the option letter **and** the answer.

PRACTICAL WORK FOR THIS UNIT

Work out and interpret all the ratios of one company from given statements · compare the liquidity of two shops.

1 What is ratio analysis?

> **Ratio analysis:** comparing two related figures from the financial statements to judge a company's **liquidity**, **borrowing (leverage)** and **profitability**.

- A ratio can be written as a **proportion** (2:1), a **percentage** (15%) or **times** (5 times).
- Uses: compare one year with another, compare two companies, spot problems early, help investors and lenders decide.

2 Example company used in this booklet

All the worked sums below use these figures of **Kiran Traders Ltd** (₹).

Position statement (31 March)	₹
Shareholders' equity	10,00,000
Long-term debt (10% loan)	6,00,000
Current liabilities	4,00,000
Fixed assets	12,00,000
Current assets: inventory 2,00,000 + debtors 1,00,000 + cash and bank 5,00,000	8,00,000
Total assets	**20,00,000**
Income statement (the year)	**₹**
Sales (of which credit sales 7,30,000)	12,00,000
Cost of goods sold	8,40,000
Gross profit	**3,60,000**
EBIT (operating profit)	3,00,000
Interest	60,000
Net profit (after 25% tax)	**1,80,000**

Check: equity 10 + long-term debt 6 + current liabilities 4 = 20 lakh = total assets.

3 Liquidity ratios

Liquidity: the ability to pay **short-term obligations** (due within a year) on time.

Ratio	Formula	Kiran Traders	Reading it
Current ratio	Current assets ÷ current liabilities	8,00,000 ÷ 4,00,000 = **2:1**	Higher = more short-term safety; 2:1 is taken as good
Quick (acid-test) ratio	(Current assets − inventory) ÷ current liabilities	6,00,000 ÷ 4,00,000 = **1.5:1**	1:1 or more is safe; stock is left out as it is slow to sell
Debtors turnover	Credit sales ÷ average debtors	7,30,000 ÷ 1,00,000 = **7.3 times**	Higher = faster collection
Average collection period	365 ÷ debtors turnover	365 ÷ 7.3 = **50 days**	Lower = customers pay sooner
Inventory turnover	Cost of goods sold ÷ average inventory	8,40,000 ÷ 2,00,000 = **4.2 times**	Higher = stock sells faster

4 Leverage (capital structure) ratios

These show how much of the business runs on **borrowed money** and whether interest can be paid safely.

Ratio	Formula	Kiran Traders	Reading it
Debt-equity	Long-term debt ÷ shareholders' equity	6,00,000 ÷ 10,00,000 = **0.6:1**	Lower = less risk for lenders
Debt to total assets	Total debt ÷ total assets	(6,00,000 + 4,00,000) ÷ 20,00,000 = **0.5** (50%)	Half the assets are paid for by outsiders
Interest coverage	EBIT ÷ interest	3,00,000 ÷ 60,000 = **5 times**	Higher = interest is paid easily

5 Profitability ratios

Ratio	Formula (× 100)	Kiran Traders	Reading it
Gross profit ratio	Gross profit ÷ sales	3,60,000 ÷ 12,00,000 = **30%**	Margin left after cost of goods
Net profit ratio	Net profit ÷ sales	1,80,000 ÷ 12,00,000 = **15%**	Profit kept from every ₹100 of sales
Return on total assets	Net profit ÷ total assets	1,80,000 ÷ 20,00,000 = **9%**	How well all assets earn
Return on capital employed (ROCE)	EBIT ÷ capital employed (equity + long-term debt)	3,00,000 ÷ 16,00,000 = **18.75%**	Return on all long-term money
Return on shareholders' equity (ROE)	Net profit ÷ shareholders' equity	1,80,000 ÷ 10,00,000 = **18%**	Return earned for the owners

For all profitability ratios, **higher is better**.

Key terms

12 terms

- **Ratio analysis:** comparing two related figures
- **Liquidity:** ability to pay short-term dues
- **Current ratio:** current assets ÷ current liabilities
- **Quick ratio:** (current assets – inventory) ÷ current liabilities
- **Average collection period:** days taken to collect from debtors
- **Leverage:** use of borrowed money
- **Debt-equity ratio:** long-term debt ÷ equity
- **Interest coverage:** EBIT ÷ interest
- **EBIT:** earnings before interest and tax
- **Capital employed:** equity + long-term debt
- **ROCE:** EBIT ÷ capital employed × 100
- **ROE:** net profit ÷ equity × 100

Common mistakes and exam tips

AVOID THESE

- Write the formula, then the working, then the answer with its unit – ':1', '%', 'times' or 'days'.
- Quick ratio leaves out **inventory**.
- Average collection period = 365 ÷ debtors turnover. Lower is better.
- ROCE uses **EBIT**; ROE and net profit ratio use **net profit**.
- Liquidity: higher is safer. Debt-equity: lower is safer. Profitability: higher is better.

A

PART A · 1 MARK EACH

Objective Questions

13 questions: MCQs, assertion–reason, fill in the blanks and true/false, like Q2–Q5 of the board paper. Answers in Part E.

ASSERTION–REASON: HOW TO ANSWER

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A1. The current ratio is: [1]

(a) Current assets ÷ current liabilities
(b) Current liabilities ÷ current assets
(c) Current assets – current liabilities
(d) Debt ÷ equity

A2. Current assets ₹6,00,000 and current liabilities ₹3,00,000. The current ratio is: [1]

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

A3. Which item is left out of current assets when working out the quick ratio? [1]

(a) Cash
(b) Debtors
(c) Inventory
(d) Bank balance

A4. Debtors turnover is 10 times. Taking 365 days, the average collection period is: [1]

(a) 10 days
(b) 36.5 days
(c) 365 days
(d) 3.65 days

A5. EBIT is ₹4,00,000 and interest is ₹50,000. The interest coverage ratio is: [1]

(a) 8 times
(b) 0.125 times
(c) 4 times
(d) 12.5 times

A6. Which of these is a profitability ratio? [1]

(a) Current ratio
(b) Debt-equity ratio
(c) Return on equity
(d) Quick ratio

A7. Sales ₹5,00,000 and gross profit ₹1,25,000. The gross profit ratio is: [1]

(a) 20% **(b)** 25% **(c)** 40% **(d)** 4%

A8. ASSERTION–REASON [1]

Assertion (A): A rising average collection period is a warning sign.
Reason (R): It means customers are taking longer to pay, so cash stays locked up.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A9. ASSERTION–REASON [1]

Assertion (A): A debt-equity ratio of 3:1 shows low financial risk.
Reason (R): The debt-equity ratio compares borrowed funds with owners' funds.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A10. FILL IN THE BLANK [1]
The quick ratio is also called the _____ ratio.

A11. FILL IN THE BLANK [1]
Capital employed = shareholders' equity + _____.

A12. TRUE OR FALSE [1]
Liquidity means the ability to meet short-term obligations due within a year.

A13. TRUE OR FALSE [1]
A lower interest coverage ratio means the company can pay its interest more easily.

B — Short Answer Questions

PART B · 2 MARKS EACH

Answer in 20–30 words: two clear points. Model answers in Part E.

B1. What is liquidity? What does the current ratio show? MUST DO [2]

B2. Current assets are ₹8,00,000 (inventory ₹2,00,000) and current liabilities ₹4,00,000. Find the current ratio and quick ratio. MUST DO [2]

B3. Credit sales are ₹7,30,000 and average debtors ₹1,00,000. Find the debtors turnover and the average collection period. [2]

B4. Differentiate between the debt-equity ratio and the interest coverage ratio. [2]

B5. Sales are ₹12,00,000, gross profit ₹3,60,000 and net profit ₹1,80,000. Find the gross profit and net profit ratios. [2]

B6. What is ratio analysis? Name its three groups of ratios. [2]

C — Long Answer Questions

PART C · 4 MARKS EACH

Answer in 50–80 words: four points, or two points with an example each. Model answers in Part E.

C1. Explain any four profitability ratios with their formulas. [4]

C2. Equity ₹10,00,000; long-term debt ₹6,00,000; current liabilities ₹4,00,000; total assets ₹20,00,000; EBIT ₹3,00,000; interest ₹60,000. Find the (a) debt-equity ratio (b) debt to total assets (c) interest coverage (d) ROCE. MUST DO [4]

D

PART D · CASE AND COMPETENCY BASED

Case-Based Questions

Read the situation, then answer from it and from the unit. These are the 4-mark board questions that test application.

D1. Competency-Based · Which shop can pay next week? [4]

Shop A: current assets ₹3,00,000, of which inventory is ₹2,40,000; current liabilities ₹1,50,000.
Shop B: current assets ₹3,00,000, of which inventory is ₹60,000; current liabilities ₹2,00,000.

(i) Find the current ratio of each shop. [1]

(ii) Find the quick ratio of each shop. [1]

(iii) Which shop can pay bills due next week more easily? Why? [2]

D2. Case-Based · The slow payers [4]

A wholesaler gives customers **30 days** to pay. Last year its credit sales were ₹3,65,000 and average debtors were ₹50,000.

(i) Find the debtors turnover. [1]

(ii) Find the average collection period. [1]

(iii) Are customers paying on time? Suggest one step. [2]

E

PART E · ANSWERS IN CBSE MARKING-SCHEME STYLE

Answers

Objective key with a reason, then model answers: numbered value points, key word first, the mark for each point in orange, and the word count under each answer. Any other correct, relevant point also earns the mark.

Objective questions – answer key

Part A

Write the option letter **and** the answer, as the marking scheme does.

Q	Answer	Why (one line)
A1	**(a) Current assets ÷ current liabilities**	Shows ability to pay short-term dues.
A2	**(b) 2:1**	6,00,000 ÷ 3,00,000 = 2.
A3	**(c) Inventory**	Stock is the slowest to turn into cash.
A4	**(b) 36.5 days**	365 ÷ 10 = 36.5.
A5	**(a) 8 times**	4,00,000 ÷ 50,000 = 8.
A6	**(c) Return on equity**	It measures return for owners.
A7	**(b) 25%**	1,25,000 ÷ 5,00,000 × 100 = 25%.
A8	**(a) Both true; R explains A**	R explains A.
A9	**(d) A false, R true**	A is false – 3:1 means heavy borrowing; R is true.
A10	**acid-test**	It is a strict test of liquidity.
A11	**long-term debt**	Used in ROCE.
A12	**True**	Measured by current and quick ratios.
A13	**False**	Correct: a higher ratio means interest is paid more easily; a low ratio is risky.

Short answers

Part B · 2 marks

B1. What is liquidity? What does the current ratio show? [2]

1. **Liquidity:** ability to meet short-term obligations due within a year. 1
2. **Current ratio:** current assets ÷ current liabilities; a higher ratio means more short-term safety. 1

24 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

B2. Current assets are ₹8,00,000 (inventory ₹2,00,000) and current liabilities ₹4,00,000. Find the current ratio and quick ratio. [2]

1. **Current ratio:** 8,00,000 ÷ 4,00,000 = 2:1. 1
2. **Quick ratio:** (8,00,000 – 2,00,000) ÷ 4,00,000 = 1.5:1. 1

16 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

B3. Credit sales are ₹7,30,000 and average debtors ₹1,00,000. Find the debtors turnover and the average collection period. [2]

1. **Turnover:** 7,30,000 ÷ 1,00,000 = 7.3 times. 1
2. **Collection period:** 365 ÷ 7.3 = 50 days. 1

15 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B4. Differentiate between the debt-equity ratio and the interest coverage ratio. [2]

1. **Debt-equity:** long-term debt ÷ equity; shows borrowing compared with owners' money. 1
2. **Interest coverage:** EBIT ÷ interest; shows how many times profit covers interest. 1

23 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B5. Sales are ₹12,00,000, gross profit ₹3,60,000 and net profit ₹1,80,000. Find the gross profit and net profit ratios. [2]

1. **GP ratio:** 3,60,000 ÷ 12,00,000 × 100 = 30%. 1
2. **NP ratio:** 1,80,000 ÷ 12,00,000 × 100 = 15%. 1

18 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B6. What is ratio analysis? Name its three groups of ratios. [2]

1. **Meaning:** comparing two related figures from financial statements to judge performance. 1
2. **Groups:** liquidity, leverage (capital structure) and profitability ratios. 1

19 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

Long answers

Part C · 4 marks

C1. Explain any four profitability ratios with their formulas. [4]

1. **Gross profit ratio:** gross profit ÷ sales × 100. 1
2. **Net profit ratio:** net profit ÷ sales × 100. 1
3. **ROCE:** EBIT ÷ (equity + long-term debt) × 100. 1
4. **ROE:** net profit ÷ shareholders' equity × 100. 1

35 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each

C2. Equity ₹10,00,000; long-term debt ₹6,00,000; current liabilities ₹4,00,000; total assets ₹20,00,000; EBIT ₹3,00,000; interest ₹60,000. Find the (a) debt-equity ratio (b) debt to total assets (c) interest coverage (d) ROCE. [4]

1. **(a):** 6,00,000 ÷ 10,00,000 = 0.6:1. 1
2. **(b):** 10,00,000 ÷ 20,00,000 = 0.5. 1
3. **(c):** 3,00,000 ÷ 60,000 = 5 times. 1
4. **(d):** 3,00,000 ÷ 16,00,000 × 100 = 18.75%. 1

27 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each | MUST DO

Case-based answers

Part D

D1. Competency-Based · Which shop can pay next week? (passage printed in Part D) [4]

(i) Find the current ratio of each shop. [1]

A: 3,00,000 ÷ 1,50,000 = **2:1**. B: 3,00,000 ÷ 2,00,000 = **1.5:1**.

(ii) Find the quick ratio of each shop. [1]

A: 60,000 ÷ 1,50,000 = **0.4:1**. B: 2,40,000 ÷ 2,00,000 = **1.2:1**.

(iii) Which shop can pay bills due next week more easily? Why? [2]

Shop B. Its quick ratio (1.2:1) is above 1, so it has enough cash and debtors. Shop A looks better on the current ratio, but most of its current assets are stock, which takes time to sell.

Marking: 1 + 1 + 2 = 4 | 1 + 1 + (1 + 1)

D2. Case-Based · The slow payers (passage printed in Part D) [4]

(i) Find the debtors turnover. [1]

3,65,000 ÷ 50,000 = **7.3 times**.

(ii) Find the average collection period. [1]

365 ÷ 7.3 = **50 days**.

(iii) Are customers paying on time? Suggest one step. [2]

No – they take 50 days against the 30 days allowed, so cash is locked up. Step: send reminders, offer a small discount for early payment, or check a customer's record before giving credit.

Marking: 1 + 1 + 2 = 4 | 1 + 1 + (1 + 1)