

CAT Data Interpretation & Logical Reasoning

Sample Paper – 16

Duration: 40 Minutes**Maximum Marks:** 60

Instructions

- This paper contains **20 questions** divided across **4 sets** (2 Data Interpretation + 2 Logical Reasoning), with 5 questions per set.
- **Marking Scheme:** +3 marks for each correct answer; –1 mark for each wrong answer; 0 marks for unattempted questions.
- All questions are **single-correct MCQ** (one best option out of four).
- Personal calculators are **not** permitted; an on-screen calculator is provided at the test centre.
- Rough sheets will be provided at the test centre. No additional stationery is allowed.

Set A: Data Interpretation — Trade Balance (Q1 – Q5)

The table below shows import and export data (in Rs. Crore) for five major commodity groups. Study the data carefully and answer Questions 1–5.

Commodity	Imports (Rs. Cr)	Exports (Rs. Cr)	Trade Balance (Rs. Cr)
Crude Oil	5,000	800	–4,200
Electronics	2,500	1,800	–700
Textiles	400	2,200	+1,800
Gems & Jewellery	600	3,500	+2,900
Pharmaceuticals	300	2,100	+1,800
Total	8,800	10,400	+1,600

Note: Trade Balance = Exports – Imports. A negative value indicates a trade deficit; a positive value indicates a trade surplus.

Q1. Which commodity had the largest trade **deficit** (i.e., Imports exceeded Exports by the greatest amount)?



(A) Electronics	(deficit Rs. 700 Cr)
(B) Gems & Jewellery	(trade surplus)
(C) Crude Oil	(deficit Rs. 4,200 Cr)
(D) Pharmaceuticals	(trade surplus)

Q2. What was the **total export value** across all five commodities?

- (A) Rs. 9,000 Cr
- (B) Rs. 9,500 Cr
- (C) Rs. 10,000 Cr
- (D) Rs. 10,400 Cr

Q3. Which commodity had the **highest export value**?

(A) Gems & Jewellery	(Rs. 3,500 Cr)
(B) Textiles	(Rs. 2,200 Cr)
(C) Pharmaceuticals	(Rs. 2,100 Cr)
(D) Electronics	(Rs. 1,800 Cr)

Q4. What was the **overall trade balance** (Total Exports – Total Imports)?

- (A) +Rs. 1,200 Cr
- (B) +Rs. 1,600 Cr
- (C) +Rs. 2,000 Cr
- (D) –Rs. 1,600 Cr

Q5. In how many commodities did **Exports exceed Imports**?

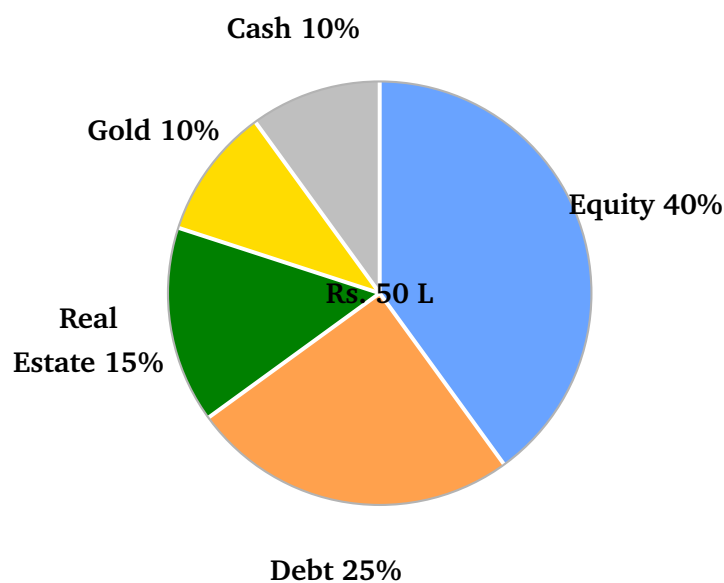
- (A) 1
- (B) 2
- (C) 3
- (D) 4

Set B: Data Interpretation — In-vestment Portfolio (Q6 – Q10)



A person has a total investment portfolio of **Rs. 50 Lakh** distributed across five asset classes as follows:

- **Equity:** Rs. 20 Lakh (40%)
- **Debt:** Rs. 12.5 Lakh (25%)
- **Real Estate:** Rs. 7.5 Lakh (15%)
- **Gold:** Rs. 5 Lakh (10%)
- **Cash:** Rs. 5 Lakh (10%)



Q6. What **percentage** of the portfolio is invested in Equity?

- (A) 20%
- (B) 25%
- (C) 30%
- (D) 40%

Q7. Which asset class has the **highest investment amount**?

- | | |
|-----------------|-----------------|
| (A) Equity | (Rs. 20 Lakh) |
| (B) Debt | (Rs. 12.5 Lakh) |
| (C) Real Estate | (Rs. 7.5 Lakh) |



(D) Gold

(Rs. 5 Lakh)

Q8. What is the **combined investment** in Gold and Cash?

(A) Rs. 8 Lakh

(B) Rs. 10 Lakh

(C) Rs. 12 Lakh

(D) Rs. 15 Lakh

Q9. How much **more** is invested in Equity than in Real Estate?

(A) Rs. 10 Lakh

(B) Rs. 11 Lakh

(C) Rs. 12.5 Lakh

(D) Rs. 15 Lakh

Q10. If Rs. 10 Lakh is added to the Debt component (new total portfolio = Rs. 60 Lakh), what is Debt's **new percentage** of the total portfolio?

(A) 30%

(B) 33%

(C) 36%

(D) 37.5%

Set C: Logical Reasoning — Building Floor Arrangement (Q11 – Q15)

Six people V, W, X, Y, Z, A live in a 6-floor building (Floor 1 = ground floor, Floor 6 = top floor), one person per floor. The following conditions apply:

- (i) V lives on Floor 3.
- (ii) W lives directly above V (i.e., on Floor 4).
- (iii) X lives on Floor 1 (the ground floor).
- (iv) Y lives on Floor 6 (the top floor).
- (v) Z lives directly above X (i.e., on Floor 2).



(vi) A lives between W (Floor 4) and Y (Floor 6), i.e., on Floor 5.

Floor 6	Y
Floor 5	A
Floor 4	W
Floor 3	V
Floor 2	Z
Floor 1	X

Q11. Who lives on **Floor 5**?

- (A) A
- (B) Y
- (C) W
- (D) Z

Q12. On which floor does **Z** live?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

Q13. Who lives **directly below** Y (Floor 6)?

- (A) W
- (B) Z
- (C) A
- (D) V

Q14. If W and A **swap floors**, who would be on Floor 4 after the swap?



- (A) W
- (B) Y
- (C) Z
- (D) A

Q15. Who lives on the **ground floor** (Floor 1)?

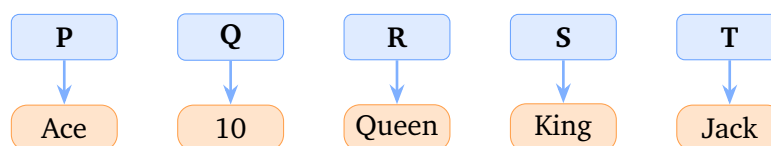
- (A) X
- (B) Z
- (C) V
- (D) W

**Set D: Logical Reasoning —
Card Distribution (Q16 – Q20)**

Five players **P, Q, R, S, T** each hold exactly one card from the set {**Ace, King, Queen, Jack, 10**}. The face value order (highest to lowest) is: $\text{Ace} > \text{King} > \text{Queen} > \text{Jack} > 10$. For numerical clues, use: $\text{Queen} = 12$, $\text{Jack} = 11$, $10 = 10$. The following conditions apply:

- (i) P holds the **Ace**.
- (ii) S holds the **King**.
- (iii) T holds the **Jack**.
- (iv) Q's card has a **lower face value** than R's card.
- (v) Q's card numerical value + R's card numerical value = 22.

Deduction: After assigning Ace to P, King to S, Jack to T, the remaining cards for Q and R are {Queen, 10}. From (v): $12 + 10 = 22$ ✓. From (iv): $Q < R$, so Q gets **10** (value 10) and R gets **Queen** (value 12).



Q16. Which card does **Q** hold?



- (A) Jack
- (B) 10
- (C) Queen
- (D) King

Q17. Which player holds the **Queen**?

- (A) Q
- (B) T
- (C) R
- (D) S

Q18. If P and S **swap cards**, who holds the **Ace** after the swap?

- (A) P
- (B) Q
- (C) R
- (D) S

Q19. Which player holds the **highest-value card**?

- | | |
|-------|---------|
| (A) P | (Ace) |
| (B) S | (King) |
| (C) R | (Queen) |
| (D) T | (Jack) |

Q20. How many players hold a card with **lower face value than the Queen** (value 12)?

- (A) 1
- (B) 2
- (C) 3
- (D) 4



Detailed Solutions

Sol. 1.

Solution

Concept: Trade deficit = Imports – Exports (when Imports > Exports).

Step-by-step:

- Electronics: Imports Rs. 2,500 Cr, Exports Rs. 1,800 Cr $\Rightarrow$ Deficit = Rs. 700 Cr.
- Crude Oil: Imports Rs. 5,000 Cr, Exports Rs. 800 Cr $\Rightarrow$ Deficit = Rs. 4,200 Cr.
- Textiles, Gems & Jewellery, Pharmaceuticals all have Exports > Imports (surpluses).

Why other options are wrong:

- (A) Electronics has a deficit of only Rs. 700 Cr, far less than Crude Oil.
- (B) Gems & Jewellery has a surplus of Rs. 2,900 Cr — no deficit.
- (D) Pharmaceuticals has a surplus of Rs. 1,800 Cr — no deficit.

Crude Oil's deficit of Rs. 4,200 Cr is the largest trade deficit.

Answer: (C) [Go Back to Q 1](#)

Sol. 2.

Solution

Concept: Sum all export values from the table.

Step-by-step:

$$800 + 1,800 + 2,200 + 3,500 + 2,100 = 10,400 \text{ Rs. Crore}$$

Verification: The table's Total row confirms Exports = Rs. 10,400 Cr.

Why other options are wrong:

- (A) Rs. 9,000 Cr — undercounts; perhaps omits Gems & Jewellery.
- (B) Rs. 9,500 Cr — incorrect partial sum.



- (C) Rs. 10,000 Cr — close but Rs. 400 short of actual total.

Total export value = Rs. 10,400 Cr. D

Answer: (D) [Go Back to Q 2](#)

Sol. 3.

Solution

Concept: Identify the maximum value in the Exports column.

Step-by-step comparison:

- Crude Oil: Rs. 800 Cr
- Electronics: Rs. 1,800 Cr
- Textiles: Rs. 2,200 Cr
- Gems & Jewellery: Rs. 3,500 Cr ← **Highest**
- Pharmaceuticals: Rs. 2,100 Cr

Why other options are wrong:

- (B) Textiles at Rs. 2,200 Cr is second-highest, not first.
- (C) Pharmaceuticals at Rs. 2,100 Cr is third.
- (D) Electronics at Rs. 1,800 Cr is fourth.

Gems & Jewellery has the highest export value at Rs. 3,500 Cr. A

Answer: (A) [Go Back to Q 3](#)

Sol. 4.

Solution

Concept: Overall Trade Balance = Total Exports – Total Imports.

Step-by-step:

$$10,400 - 8,800 = +1,600 \text{ Rs. Crore (surplus)}$$

Why other options are wrong:

- (A) +Rs. 1,200 Cr — understates the surplus by Rs. 400 Cr.



- (C) +Rs. 2,000 Cr — overstates by Rs. 400 Cr.
- (D) –Rs. 1,600 Cr — sign error; Exports exceed Imports so balance is positive.

Overall trade balance = +Rs. 1,600 Cr (surplus). B

Answer: (B) [Go Back to Q 4](#)

Sol. 5.

Solution

Concept: Count commodities where Exports > Imports (positive trade balance).

Step-by-step:

- Crude Oil: Exports 800 < Imports 5,000 → **Deficit** (No)
- Electronics: Exports 1,800 < Imports 2,500 → **Deficit** (No)
- Textiles: Exports 2,200 > Imports 400 → **Surplus** (Yes)
- Gems & Jewellery: Exports 3,500 > Imports 600 → **Surplus** (Yes)
- Pharmaceuticals: Exports 2,100 > Imports 300 → **Surplus** (Yes)

Count = 3 commodities (Textiles, Gems & Jewellery, Pharmaceuticals).

Why other options are wrong:

- (A) 1 — only counts one surplus commodity.
- (B) 2 — misses one of the three surplus commodities.
- (D) 4 — overcounts; only 3 commodities have export surplus.

C

Answer: (C) [Go Back to Q 5](#)



Sol. 6.

Solution**Concept:** Percentage = (Equity Investment / Total Portfolio) × 100.**Step-by-step:**

$$\frac{20}{50} \times 100 = 40\%$$

Why other options are wrong:

- (A) 20% — this is the actual Lakh amount (Rs. 20 Lakh), not the percentage.
- (B) 25% — this is the Debt percentage.
- (C) 30% — no asset class has exactly 30%.

Equity accounts for 40% of the portfolio. DAnswer: (D) [Go Back to Q 6](#)

Sol. 7.

Solution**Concept:** Compare investment amounts across all asset classes.**Step-by-step:**

- Equity: Rs. 20 Lakh ← **Highest**
- Debt: Rs. 12.5 Lakh
- Real Estate: Rs. 7.5 Lakh
- Gold: Rs. 5 Lakh
- Cash: Rs. 5 Lakh

Why other options are wrong:

- (B) Debt (Rs. 12.5 Lakh) is second, not first.
- (C) Real Estate (Rs. 7.5 Lakh) is third.
- (D) Gold (Rs. 5 Lakh) is tied for fourth.

Equity has the highest investment at Rs. 20 Lakh. AAnswer: (A) [Go Back to Q 7](#)

Sol. 8.

Solution**Concept:** Add Gold and Cash investment amounts.**Step-by-step:**

$$\text{Gold} + \text{Cash} = 5 + 5 = \text{Rs. 10 Lakh}$$

Why other options are wrong:

- (A) Rs. 8 Lakh — neither Gold nor Cash individually equals Rs. 3 or Rs. 5 to sum to Rs. 8.
- (C) Rs. 12 Lakh — would require Rs. 6 Lakh + Rs. 6 Lakh, which doesn't match the data.
- (D) Rs. 15 Lakh — that's the combined Gold + Cash + Real Estate.

Combined Gold + Cash = Rs. 10 Lakh. BAnswer: (B) [Go Back to Q 8](#)

Sol. 9.

Solution**Concept:** Difference = Equity Investment – Real Estate Investment.**Step-by-step:**

$$20 - 7.5 = 12.5 \text{ Lakh}$$

Why other options are wrong:

- (A) Rs. 10 Lakh — this would imply Real Estate = Rs. 10 Lakh, which is incorrect.
- (B) Rs. 11 Lakh — off by Rs. 1.5 Lakh.
- (D) Rs. 15 Lakh — overcounts; would require Real Estate of only Rs. 5 Lakh.

Equity exceeds Real Estate by Rs. 12.5 Lakh. CAnswer: (C) [Go Back to Q 9](#)

Sol. 10.

Solution**Concept:** New percentage = (New Debt Amount / New Total Portfolio) $\times$ 100.**Step-by-step:**

- New Debt = Rs. 12.5 + Rs. 10 = Rs. 22.5 Lakh
- New Total Portfolio = Rs. 50 + Rs. 10 = Rs. 60 Lakh
- New Debt % = $\frac{22.5}{60} \times 100 = 37.5\%$

Why other options are wrong:

- (A) 30% — would require Debt = Rs. 18 Lakh out of Rs. 60 Lakh.
- (B) 33% — would require Debt = Rs. 19.8 Lakh; Rs. 22.5 Lakh is higher.
- (C) 36% — would require Debt = Rs. 21.6 Lakh, not Rs. 22.5 Lakh.

Debt's new percentage = 37.5%. DAnswer: (D) [Go Back to Q 10](#)

Sol. 11.

Solution**Concept:** Read the floor arrangement directly from the given conditions.**Final arrangement:**

Floor 1: X, Floor 2: Z, Floor 3: V, Floor 4: W, Floor 5: A, Floor 6: Y

From condition (vi): A lives on Floor 5.

Why other options are wrong:

- (B) Y lives on Floor 6, not Floor 5.
- (C) W lives on Floor 4, not Floor 5.
- (D) Z lives on Floor 2, not Floor 5.

A lives on Floor 5. AAnswer: (A) [Go Back to Q 11](#)

Sol. 12.

Solution**Concept:** Apply condition (v): Z lives directly above X.**Step-by-step:**

- Condition (iii): X lives on Floor 1.
- Condition (v): Z lives directly above X $\Rightarrow$ Z is on Floor 2.

Why other options are wrong:

- (A) Floor 1 — that is X's floor, not Z's.
- (C) Floor 3 — that is V's floor.
- (D) Floor 4 — that is W's floor.

Z lives on Floor 2. B**Answer: (B)** [Go Back to Q 12](#)

Sol. 13.

Solution**Concept:** The person directly below Y (Floor 6) lives on Floor 5.**Step-by-step:**

- Y is on Floor 6 (condition iv).
- Floor 5 is occupied by A (condition vi).
- Therefore, A is directly below Y.

Why other options are wrong:

- (A) W is on Floor 4, two floors below Y.
- (B) Z is on Floor 2, four floors below Y.
- (D) V is on Floor 3, three floors below Y.

A (Floor 5) lives directly below Y (Floor 6). C**Answer: (C)** [Go Back to Q 13](#)

Sol. 14.

Solution**Concept:** Apply the swap: W (Floor 4) $\leftrightarrow$ A (Floor 5).**Step-by-step:**

- Before swap: W on Floor 4, A on Floor 5.
- After swap: A moves to Floor 4, W moves to Floor 5.
- Therefore, Floor 4 now has A.

Why other options are wrong:

- (A) W — W moves to Floor 5 after the swap, not Floor 4.
- (B) Y — Y remains on Floor 6 and is unaffected.
- (C) Z — Z remains on Floor 2 and is unaffected.

After the swap, A would be on Floor 4. DAnswer: (D) [Go Back to Q 14](#)

Sol. 15.

Solution**Concept:** Read the ground floor assignment directly from condition (iii).**Step-by-step:**

- Condition (iii) explicitly states: X lives on Floor 1 (ground floor).

Why other options are wrong:

- (B) Z is on Floor 2.
- (C) V is on Floor 3.
- (D) W is on Floor 4.

X lives on the ground floor (Floor 1). AAnswer: (A) [Go Back to Q 15](#)

Sol. 16.

Solution**Concept:** Use conditions (iv) and (v) to determine Q's card.**Step-by-step:**

- P holds Ace, S holds King, T holds Jack (conditions i, ii, iii).
- Remaining cards: {Queen, 10} for Q and R.
- Condition (v): Q's value + R's value = 22 $\Rightarrow 12 + 10 = 22$ ✓.
- Condition (iv): $Q < R$ in face value $\Rightarrow$ Q gets 10 (value 10), R gets Queen (value 12).

Why other options are wrong:

- (A) Jack — T holds the Jack, not Q.
- (C) Queen — R holds the Queen ($R > Q$ in face value).
- (D) King — S holds the King.

Q holds the 10. BAnswer: (B) [Go Back to Q 16](#)

Sol. 17.

Solution**Concept:** From the full assignment, identify who holds the Queen.**Full assignment:** P = Ace, Q = 10, R = Queen, S = King, T = Jack.**Why other options are wrong:**

- (A) Q holds the 10, not the Queen.
- (B) T holds the Jack, not the Queen.
- (D) S holds the King, not the Queen.

R holds the Queen. CAnswer: (C) [Go Back to Q 17](#)

Sol. 18.

Solution**Concept:** Apply the swap: P (Ace) $\leftrightarrow$ S (King).**Step-by-step:**

- Before swap: P holds Ace, S holds King.
- After swap: S receives P's Ace; P receives S's King.
- Therefore, S holds the Ace after the swap.

Why other options are wrong:

- (A) P — P gives away the Ace and receives the King instead.
- (B) Q — Q is unaffected; Q still holds 10.
- (C) R — R is unaffected; R still holds Queen.

After the swap, S holds the Ace. DAnswer: (D) [Go Back to Q 18](#)

Sol. 19.

Solution**Concept:** The face value order is Ace > King > Queen > Jack > 10.**Step-by-step:**

- P holds Ace — **highest value card in the set.**
- S holds King — second highest.
- R holds Queen — third.
- T holds Jack — fourth.
- Q holds 10 — lowest.

Why other options are wrong:

- (B) S holds King, which is lower than Ace.
- (C) R holds Queen, which is lower than both Ace and King.
- (D) T holds Jack, which is fourth in rank.



P holds the highest-value card (Ace). A

Answer: (A) [Go Back to Q 19](#)

Sol. 20.

Solution

Concept: Count players holding cards with face value strictly less than Queen (value 12).

Step-by-step:

- P holds Ace (value > 12) — **No**
- Q holds 10 (value $10 < 12$) — **Yes**
- R holds Queen (value 12) — **No** (equal, not less)
- S holds King (value > 12) — **No**
- T holds Jack (value $11 < 12$) — **Yes**

Count = 2 players (Q with 10, T with Jack).

Why other options are wrong:

- (A) 1 — misses either Q or T.
- (C) 3 — overcounts; would incorrectly include R (Queen = 12, not < 12).
- (D) 4 — would include P or S, but Ace and King are higher than Queen.

2 players (Q and T) hold cards with lower face value than the Queen. B

Answer: (B) [Go Back to Q 20](#)



Answer Key — CAT DILR Sample Paper 16

1	C	2	D	3	A	4	B	5	C
6	D	7	A	8	B	9	C	10	D
11	A	12	B	13	C	14	D	15	A
16	B	17	C	18	D	19	A	20	B

Quick Reference — All 20 Answers:

Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	6	D	11	A	16	B
2	D	7	A	12	B	17	C
3	A	8	B	13	C	18	D
4	B	9	C	14	D	19	A
5	C	10	D	15	A	20	B

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