

# CAT Data Interpretation & Logical Reasoning

## Sample Paper – 15

Duration: 40 Minutes

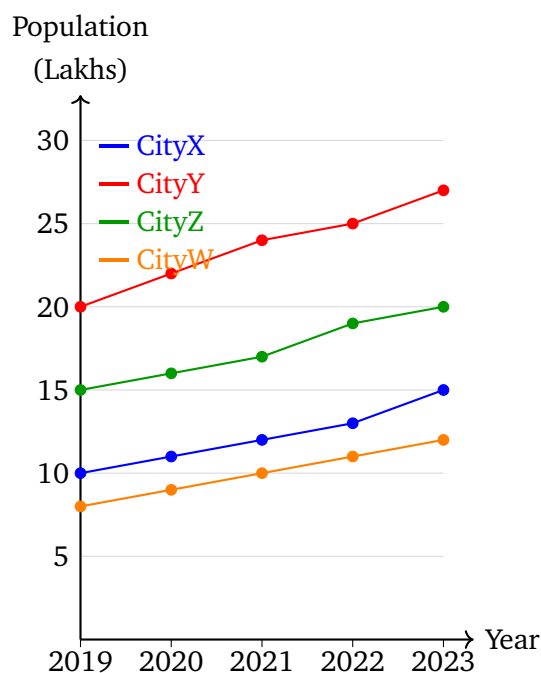
Maximum Marks: 60

### Instructions

- This paper contains **20 questions** across **4 sets** (2 Data Interpretation + 2 Logical Reasoning).
- **Marking Scheme:** +3 marks for every correct answer, –1 mark for every wrong answer, and 0 for unattempted questions.
- All questions are **single-correct MCQ**.
- No personal calculators are permitted; an **on-screen calculator** will be provided.
- Rough sheets will be provided at the test centre.

### Set A: Data Interpretation — City Population Growth (Q1 – Q5)

**Direction (Q1–Q5):** The line chart below shows the population (in Lakhs) of four cities — CityX, CityY, CityZ, and CityW — from 2019 to 2023. Study the chart carefully and answer the questions that follow.



1. Which city had the highest population in 2023?
  - (A) CityX (15 Lakh)
  - (B) CityY (27 Lakh)
  - (C) CityZ (20 Lakh)
  - (D) CityW (12 Lakh)
2. What was CityX's population growth from 2019 to 2023?
  - (A) 4 Lakh
  - (B) 4.5 Lakh
  - (C) 5 Lakh
  - (D) 6 Lakh
3. Which city had the highest **absolute** population growth from 2019 to 2023?
  - (A) CityX (5 Lakh)
  - (B) CityZ (5 Lakh)
  - (C) CityW (4 Lakh)
  - (D) CityY (7 Lakh)
4. What was CityW's population in 2021?
  - (A) 10 Lakh
  - (B) 11 Lakh
  - (C) 9 Lakh
  - (D) 12 Lakh
5. What was the **total** population of all four cities combined in 2023?
  - (A) 70 Lakh
  - (B) 74 Lakh
  - (C) 76 Lakh
  - (D) 78 Lakh



**Set B: Data Interpretation —  
Sports League Table (Q6 – Q10)**

**Direction (Q6–Q10):** The table below shows the standings of 5 teams after 8 matches each in a sports league. (Win = 3 pts, Draw = 1 pt, Loss = 0 pts.) Study the data and answer the questions.

| Team | W | L | D | Points | Goals For | Goals Against |
|------|---|---|---|--------|-----------|---------------|
| T1   | 5 | 1 | 2 | 17     | 18        | 8             |
| T2   | 6 | 2 | 0 | 18     | 22        | 10            |
| T3   | 4 | 3 | 1 | 13     | 14        | 12            |
| T4   | 3 | 3 | 2 | 11     | 12        | 13            |
| T5   | 2 | 5 | 1 | 7      | 9         | 18            |

6. Which team topped the league table (highest points)?
- (A) T1 (17 pts)  
(B) T3 (13 pts)  
(C) T2 (18 pts)  
(D) T4 (11 pts)
7. Which team had the most losses?
- (A) T1 (1 loss)  
(B) T2 (2 losses)  
(C) T3 (3 losses)  
(D) T5 (5 losses)
8. What was T3's goal difference (Goals For minus Goals Against)?
- (A) +2  
(B) +3  
(C) +1  
(D) -1



9. How many teams had **more wins than losses**?

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

10. What were T4's total points?

- (A) 9
- (B) 10
- (C) 11
- (D) 12

**Set C: Logical Reasoning —  
Height Ranking (Q11 – Q15)**

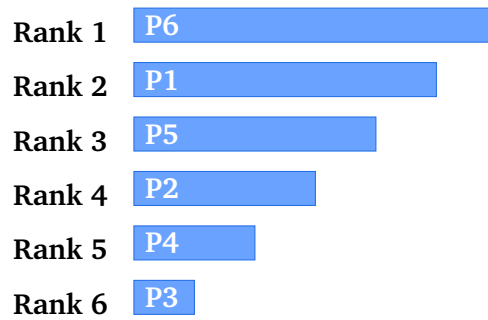
**Direction (Q11–Q15):** Six candidates P1–P6 are ranked by height (Rank 1 = tallest, Rank 6 = shortest). Use the conditions below to determine the ranking and answer the questions.

- (i) P2 is taller than P4 but shorter than P1.
- (ii) P3 is the shortest (Rank 6).
- (iii) P5 is taller than P2 but shorter than P6.
- (iv) P6 is the tallest (Rank 1).
- (v) P4 is taller than P3 but shorter than P2.
- (vi) P1 is taller than P5.

**Derived Ranking (tallest to shortest):**

$P6 (1) > P1 (2) > P5 (3) > P2 (4) > P4 (5) > P3 (6)$





← Relative Height →

11. What is P4's rank from tallest?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

12. Who is the tallest candidate?

- (A) P6
- (B) P1
- (C) P5
- (D) P2

13. Who is ranked 3rd tallest?

- (A) P1
- (B) P5
- (C) P2
- (D) P4

14. Who is ranked immediately **above** P2 in the height ranking?

- (A) P1
- (B) P6
- (C) P5



(D) P4

15. If P1 and P3 swapped heights, who would be the **shortest**?

(A) P3

(B) P4

(C) P2

(D) P1

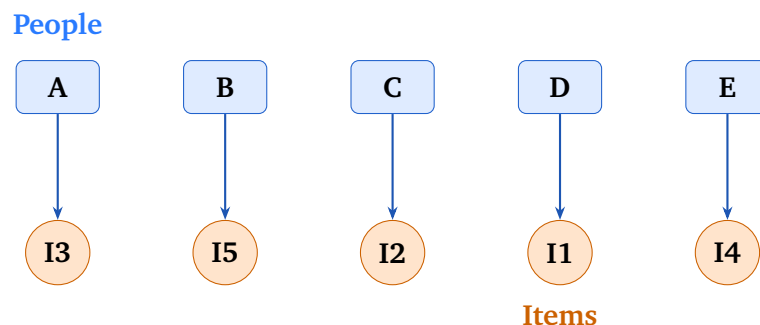
**Set D: Logical Reasoning —  
Item Distribution (Q16 – Q20)**

**Direction (Q16–Q20):** Five items I1–I5 are distributed among five people A–E (one item each). Use the conditions below to determine the distribution and answer the questions.

- (i) A receives I3.
- (ii) D receives I1.
- (iii) E receives I4.
- (iv) B's item number is higher than C's item number.
- (v) B's item number plus C's item number equals 7.

**Derivation:** Remaining items for B and C: {I2, I5}. Since  $2 + 5 = 7$  (condition v) and  $5 > 2$  (condition iv), B gets I5 and C gets I2.

**Final Assignment:** A = I3, B = I5, C = I2, D = I1, E = I4.



16. Who receives item I5?

(A) B



(B) C

(C) D

(D) E

17. Which item does C receive?

(A) I3

(B) I2

(C) I5

(D) I1

18. How many items have a **higher number** than C's item (I2)?

(A) 1

(B) 2

(C) 3

(D) 4

19. If B and D swap their items, what item would B have?

(A) I3

(B) I4

(C) I2

(D) I1

20. Who receives item I4?

(A) E

(B) B

(C) C

(D) D



## Detailed Solutions

1.

### Solution

**Concept:** Reading a line chart to identify the maximum value for a given year.

**Steps:**

- From the chart, in 2023 the populations are: CityX = 15 Lakh, CityY = 27 Lakh, CityZ = 20 Lakh, CityW = 12 Lakh.
- Comparing all values:  $27 > 20 > 15 > 12$ .
- CityY has the highest population in 2023.

**Why wrong:** (A) CityX = 15 Lakh — not the highest. (C) CityZ = 20 Lakh — second highest. (D) CityW = 12 Lakh — the lowest.

**Final Answer:**

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

2.

### Solution

**Concept:** Computing absolute growth = final value – initial value.

**Steps:**

- CityX population in 2019 = 10 Lakh; in 2023 = 15 Lakh.
- Growth =  $15 - 10 = 5$  Lakh.

**Why wrong:** (A) 4 Lakh — incorrect subtraction. (B) 4.5 Lakh — non-integer and incorrect. (D) 6 Lakh — overestimate.

**Final Answer:**

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



3.

**Solution**

**Concept:** Comparing absolute population growth (2023 value – 2019 value) across all cities.

**Steps:**

- CityX:  $15 - 10 = 5$  Lakh.
- CityY:  $27 - 20 = 7$  Lakh.
- CityZ:  $20 - 15 = 5$  Lakh.
- CityW:  $12 - 8 = 4$  Lakh.
- Maximum growth = 7 Lakh (CityY).

**Why wrong:** (A) CityX grew by 5 Lakh — not the highest. (B) CityZ also grew by 5 Lakh — tied with X but less than Y. (C) CityW grew by only 4 Lakh.

**Final Answer:**

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

4.

**Solution**

**Concept:** Direct reading of a data point from the line chart.

**Steps:**

- Locate CityW's line on the chart.
- At  $x = 2021$  (third data point), CityW's value = 10 Lakh.

**Why wrong:** (B) 11 Lakh is CityW's 2022 value. (C) 9 Lakh is the 2020 value. (D) 12 Lakh is the 2023 value.

**Final Answer:**

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



5.

**Solution****Concept:** Summing populations of all four cities in a given year.**Steps:**

- In 2023: CityX = 15, CityY = 27, CityZ = 20, CityW = 12.
- Total =  $15 + 27 + 20 + 12 = 74$  Lakh.

**Why wrong:** (A) 70 — undercount. (C) 76 and (D) 78 — overcount; likely arithmetic errors.**Final Answer:** BAnswer: (B) [Go Back to Q 5](#)

6.

**Solution****Concept:** Identifying the maximum in the Points column of the league table.**Steps:**

- Points: T1 = 17, T2 = 18, T3 = 13, T4 = 11, T5 = 7.
- Maximum = 18, belonging to T2.

**Verification:** T2:  $6 \times 3 + 0 \times 1 = 18$  pts ✓**Why wrong:** (A) T1 has 17 pts — second highest. (B) T3 has 13 pts. (D) T4 has only 11 pts.**Final Answer:** CAnswer: (C) [Go Back to Q 6](#)

7.

**Solution****Concept:** Identifying the maximum in the Losses (L) column.**Steps:**

- Losses: T1 = 1, T2 = 2, T3 = 3, T4 = 3, T5 = 5.
- Maximum losses = 5, belonging to T5.



**Why wrong:** (A) T1 has only 1 loss. (B) T2 has 2 losses. (C) T3 has 3 losses — less than T5.

**Final Answer:**

**Answer:** (D) [Go Back to Q 7](#)

8.

### Solution

**Concept:** Goal difference = Goals For – Goals Against.

**Steps:**

- T3: Goals For = 14, Goals Against = 12.
- Goal difference =  $14 - 12 = +2$ .

**Why wrong:** (B) +3 — overestimate. (C) +1 — off by one. (D) –1 — incorrect sign; T3 has a positive difference.

**Final Answer:**

**Answer:** (A) [Go Back to Q 8](#)

9.

### Solution

**Concept:** Count teams where Wins (W) > Losses (L).

**Steps:**

- T1:  $W=5, L=1 \Rightarrow 5 > 1 \checkmark$
- T2:  $W=6, L=2 \Rightarrow 6 > 2 \checkmark$
- T3:  $W=4, L=3 \Rightarrow 4 > 3 \checkmark$
- T4:  $W=3, L=3 \Rightarrow 3 = 3$  (not more)  $\times$
- T5:  $W=2, L=5 \Rightarrow 2 < 5 \times$
- Total teams with  $W > L = 3$ .

**Why wrong:** (A) 1 — undercounts T1, T2, T3. (C) 4 — includes T4 ( $3W = 3L$ , not greater). (D) 2 — undercounts by one.

**Final Answer:**



**Answer: (B)** [Go Back to Q 9](#)

10.

### Solution

**Concept:** Direct reading from the Points column of the table.

**Steps:**

- T4: W=3, D=2, L=3.
- Points =  $3 \times 3 + 2 \times 1 + 3 \times 0 = 9 + 2 = 11$ .
- From the table, T4's points = 11.

**Why wrong:** (A) 9 — only counts wins ( $3 \times 3 = 9$ ), ignores draws. (B) 10 — arithmetic error. (D) 12 — overcount.

**Final Answer:**

**Answer: (C)** [Go Back to Q 10](#)

11.

### Solution

**Concept:** Applying given logical conditions to derive the height ranking.

**Steps:**

- From conditions (iv) and (ii): P6 is Rank 1 (tallest), P3 is Rank 6 (shortest).
- From condition (vi):  $P1 > P5$ ; from (iii):  $P6 > P5 > P2$ ; combined with  $P6 > P1 > P5$ .
- From (i):  $P1 > P2 > P4$ ; from (v):  $P2 > P4 > P3$ .
- Full order:  $P6 (1) > P1 (2) > P5 (3) > P2 (4) > P4 (5) > P3 (6)$ .
- P4 is Rank 5.

**Why wrong:** (A) Rank 2 is P1. (B) Rank 3 is P5. (C) Rank 4 is P2.

**Final Answer:**

**Answer: (D)** [Go Back to Q 11](#)



12.

**Solution****Concept:** Identifying Rank 1 (tallest) from the derived ranking.**Steps:**

- Condition (iv) explicitly states: P6 is the tallest (Rank 1).
- The derived ranking confirms:  $P6 > P1 > P5 > P2 > P4 > P3$ .

**Why wrong:** (B) P1 is Rank 2 (second tallest). (C) P5 is Rank 3. (D) P2 is Rank 4.**Final Answer:** **Answer:** (A) [Go Back to Q 12](#)

13.

**Solution****Concept:** Identifying the candidate at Rank 3 in the derived height order.**Steps:**

- Derived ranking: P6 (1), P1 (2), P5 (3), P2 (4), P4 (5), P3 (6).
- Rank 3 = P5.

**Why wrong:** (A) P1 is Rank 2, not 3. (C) P2 is Rank 4. (D) P4 is Rank 5.**Final Answer:** **Answer:** (B) [Go Back to Q 13](#)

14.

**Solution****Concept:** Finding the candidate ranked one position above (i.e., rank number one less than) P2.**Steps:**

- P2 is Rank 4.
- Rank 3 (immediately above) = P5.
- Therefore, P5 is ranked immediately above P2.



**Why wrong:** (A) P1 is Rank 2, two positions above P2. (B) P6 is Rank 1. (D) P4 is Rank 5, which is below P2.

**Final Answer:**

**Answer:** (C) [Go Back to Q 14](#)

15.

### Solution

**Concept:** Hypothetical swap — if P1 and P3 exchange heights, P1 takes the shortest height.

**Steps:**

- Original: P3 is the shortest (Rank 6); P1 is Rank 2.
- After swap: P1 acquires P3's (shortest) height; P3 acquires P1's (second tallest) height.
- New ranking would be: P6 (1) > P3 (2) > P5 (3) > P2 (4) > P4 (5) > P1 (6).
- P1 becomes the shortest.

**Why wrong:** (A) P3 is no longer shortest after the swap — it moves to Rank 2. (B) P4 remains Rank 5. (C) P2 remains Rank 4.

**Final Answer:**

**Answer:** (D) [Go Back to Q 15](#)

16.

### Solution

**Concept:** Applying item-distribution conditions to find who receives a specific item.

**Steps:**

- Conditions (i), (ii), (iii) fix: A = I3, D = I1, E = I4.
- Remaining people: B, C; remaining items: I2, I5.
- Condition (v): B's item no. + C's item no. = 7  $\Rightarrow$  only pair from {2, 5}: 2 + 5 = 7.
- Condition (iv): B > C  $\Rightarrow$  B = I5, C = I2.
- Therefore, B receives I5.



**Why wrong:** (B) C receives I2, not I5. (C) D receives I1. (D) E receives I4.

**Final Answer:**

**Answer: (A)** [Go Back to Q 16](#)

17.

### Solution

**Concept:** Identifying C's item from the derived distribution.

**Steps:**

- From the derivation:  $B = I5$ ,  $C = I2$  (since  $2 + 5 = 7$  and  $B > C$  implies  $B=I5$ ,  $C=I2$ ).
- C receives I2.

**Why wrong:** (A) I3 is assigned to A. (C) I5 is assigned to B. (D) I1 is assigned to D.

**Final Answer:**

**Answer: (B)** [Go Back to Q 17](#)

18.

### Solution

**Concept:** Counting items with item number strictly greater than 2 (C's item is I2).

**Steps:**

- All items: I1, I2, I3, I4, I5.
- Items with number  $> 2$ : I3, I4, I5.
- Count = 3.

**Why wrong:** (A) 1 — severe undercount. (B) 2 — counts only I3, I4 (misses I5). (D) 4 — overcounts; I1 has a lower number than I2.

**Final Answer:**

**Answer: (C)** [Go Back to Q 18](#)



19.

**Solution****Concept:** Hypothetical swap between B and D's items.**Steps:**

- Original assignments: B = I5, D = I1.
- After swap: B gets D's item (I1); D gets B's item (I5).
- Therefore, B would have I1.

**Why wrong:** (A) I3 belongs to A, not involved in this swap. (B) I4 belongs to E. (C) I2 belongs to C.**Final Answer:** **Answer:** (D) [Go Back to Q 19](#)

20.

**Solution****Concept:** Direct reading of the item distribution.**Steps:**

- Condition (iii) directly states: E receives I4.
- Final assignment confirms: E = I4.

**Why wrong:** (B) B receives I5. (C) C receives I2. (D) D receives I1.**Final Answer:** **Answer:** (A) [Go Back to Q 20](#)

## Answer Key

### CAT DILR Sample Paper 15 — Complete Answer Key

| Q.No | Ans |    | Q.No | Ans |   | Q.No | Ans |    | Q.No |
|------|-----|----|------|-----|---|------|-----|----|------|
| 1    | B   | 2  | C    | 3   | D | 4    | A   | 5  | B    |
| 6    | C   | 7  | D    | 8   | A | 9    | B   | 10 | C    |
| 11   | D   | 12 | A    | 13  | B | 14   | C   | 15 | D    |
| 16   | A   | 17 | B    | 18  | C | 19   | D   | 20 | A    |

#### Quick Reference:

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

**Scoring Guide:** Each correct answer = +3 marks |  
Each wrong answer = -1 mark | Unattempted = 0

**Maximum Score: 60** | **Total Questions: 20**

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