

CAT Data Interpretation & Logical Reasoning

Sample Paper – 13

Duration: 40 Minutes

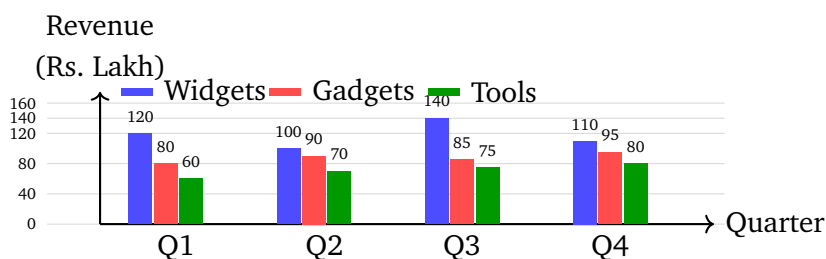
Maximum Marks: 60

Instructions

- This paper contains **20 questions** spread across **4 sets** (2 Data Interpretation + 2 Logical Reasoning).
- Each correct answer carries **+3 marks**. Each wrong answer attracts a penalty of **–1 mark**. Un-attempted questions carry **0 marks**.
- All questions are **Multiple Choice Questions (MCQ)** with four options (A), (B), (C), (D).
- Personal calculators are **not allowed**; an on-screen calculator will be provided during the actual exam.
- **Rough sheets** will be provided; write your roll number on every sheet and return them after the exam.

SET A (Q1–Q5) Data Interpretation — Quarterly Product Sales

Directions (Q1–Q5): The grouped bar chart below shows the quarterly revenue (in Rs. Lakh) earned by three products — Widgets, Gadgets, and Tools — over four quarters (Q1–Q4). Study the chart carefully and answer the questions that follow.



1. Which quarter had the **highest total revenue** across all three products?
(A) Q3 (Rs. 300 Lakh)
(B) Q4 (Rs. 285 Lakh)
(C) Q1 (Rs. 260 Lakh)



- (D) Q2 (Rs. 260 Lakh)
2. What was the **total Gadgets revenue** across all four quarters?
- (A) Rs. 330 Lakh
(B) Rs. 350 Lakh
(C) Rs. 360 Lakh
(D) Rs. 340 Lakh
3. Which product had the **highest total revenue** across all four quarters?
- (A) Gadgets (Rs. 350 Lakh)
(B) Tools (Rs. 285 Lakh)
(C) Widgets (Rs. 470 Lakh)
(D) All products had equal totals
4. What was the **Tools revenue in Q4**?
- (A) Rs. 60 Lakh
(B) Rs. 70 Lakh
(C) Rs. 75 Lakh
(D) Rs. 80 Lakh
5. What was the **total revenue across all products in Q2**?
- (A) Rs. 260 Lakh
(B) Rs. 295 Lakh
(C) Rs. 300 Lakh
(D) Rs. 285 Lakh

**SET B (Q6–Q10) Data Inter-
pretation — Country Export Data**

Directions (Q6–Q10): The table below shows the export values (\$ Billion) for five countries in 2022 and 2023. Study the data carefully and answer the questions that follow.



Country	2022 Exports (\$B)	2023 Exports (\$B)
India	450	500
China	1200	1350
USA	900	950
Germany	600	650
Japan	350	400

6. Which country had the **highest exports in 2023**?
- (A) USA (\$950B)
(B) China (\$1350B)
(C) Germany (\$650B)
(D) India (\$500B)
7. What was **India's export growth** from 2022 to 2023?
- (A) \$30 Billion
(B) \$40 Billion
(C) \$50 Billion
(D) \$60 Billion
8. What was the **total exports of all 5 countries** in 2022?
- (A) \$3,200B
(B) \$3,350B
(C) \$3,450B
(D) \$3,500B
9. Which country had the **highest absolute export growth** from 2022 to 2023?
- (A) China (\$150B)
(B) India (\$50B)
(C) USA (\$50B)



(D) Germany (\$50B)

10. What is the ratio of **Japan's 2022 exports to Japan's 2023 exports** in simplest form?

(A) 6:7

(B) 7:8

(C) 8:9

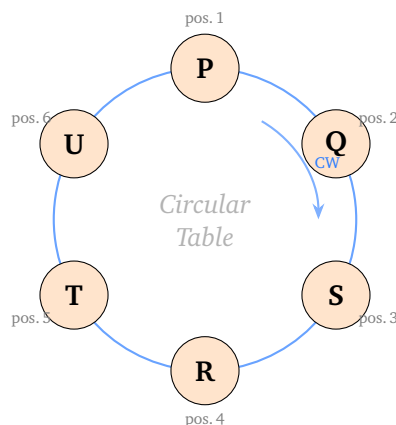
(D) 3:4

SET C (Q11–Q15) Logical Reasoning — Circular Seating Arrangement

Directions (Q11–Q15): Six people P, Q, R, S, T, and U are seated around a circular table at positions 1–6 (numbered clockwise). Read the following conditions carefully and answer the questions.

- (i) P is at position 1.
- (ii) Q is immediately clockwise from P (position 2).
- (iii) R is diametrically opposite P (position 4).
- (iv) T is immediately clockwise from R (position 5).
- (v) U is immediately clockwise from T (position 6).

Note: The only remaining person is S, who occupies position 3.



11. Which person sits at **position 3**?



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

12. Who sits **immediately clockwise from R** (position 4)?

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

13. Who is **diametrically opposite Q** (position 2)?

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

14. Who sits **immediately counter-clockwise from U** (position 6)?

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

15. If **P and R swap seats**, who would then be at **position 1**?

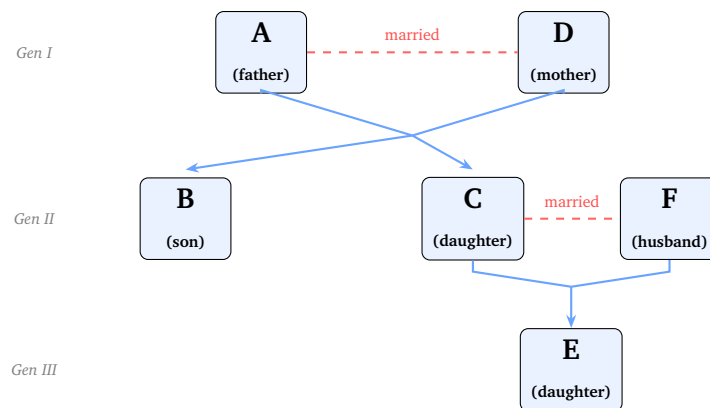
- (A) P
- (B) Q
- (C) R
- (D) S

SET D (Q16–Q20) Logical
Reasoning — Family Relations



Directions (Q16–Q20): A family has six members. Study the family structure described below and answer the questions that follow.

- A is the father and D is the mother in the family.
- B (son) and C (daughter) are the children of A and D.
- F is the husband of C.
- E is the daughter of C and F.



16. How is **F** related to **A**?

- (A) Son
- (B) Brother
- (C) Father
- (D) Son-in-law

17. How is **E** related to **D**?

- (A) Granddaughter
- (B) Daughter
- (C) Niece
- (D) Sister

18. How many children does **A** have?

- (A) 1



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

19. How is **B** related to **E**?

- (A) Father
- (B) Cousin
- (C) Uncle
- (D) Brother

20. Who is **C's** father?

- (A) B
- (B) F
- (C) E
- (D) A



Detailed Solutions

1.

Solution

Concept: Add revenues for each quarter across all three products.

Step 1 — Calculate quarter totals:

- Q1: Widgets + Gadgets + Tools = $120 + 80 + 60 = 260$ Lakh
- Q2: $100 + 90 + 70 = 260$ Lakh
- Q3: $140 + 85 + 75 = 300$ Lakh
- Q4: $110 + 95 + 80 = 285$ Lakh

Step 2 — Identify the maximum: Q3 gives the highest total of Rs. 300 Lakh.

Why other options are wrong:

- (B) Q4 = 285 Lakh < 300 Lakh.
- (C) Q1 = 260 Lakh < 300 Lakh.
- (D) Q2 = 260 Lakh < 300 Lakh.

Final Answer: **A** — Q3 (Rs. 300 Lakh).

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

2.

Solution

Concept: Sum Gadgets revenue across all four quarters.

Step 1 — Read Gadgets values from the chart: Q1 = 80, Q2 = 90, Q3 = 85, Q4 = 95.

Step 2 — Compute total: $80 + 90 + 85 + 95 = 350$ Lakh.

Why other options are wrong:

- (A) 330 Lakh — incorrect; misses 20 Lakh.
- (C) 360 Lakh — overstates by 10 Lakh.
- (D) 340 Lakh — off by 10 Lakh.

Final Answer: **B** — Rs. 350 Lakh.



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

3.

Solution

Concept: Compute the four-quarter total for each product.

Step 1 — Product totals:

- Widgets: $120 + 100 + 140 + 110 = 470$ Lakh
- Gadgets: $80 + 90 + 85 + 95 = 350$ Lakh
- Tools: $60 + 70 + 75 + 80 = 285$ Lakh

Step 2 — Compare: Widgets (470) > Gadgets (350) > Tools (285).

Why other options are wrong:

- (A) Gadgets only totalled 350 Lakh.
- (B) Tools only totalled 285 Lakh.
- (D) All products clearly have different totals.

Final Answer: ☐ C — Widgets (Rs. 470 Lakh).

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

4.

Solution

Concept: Direct data reading from the bar chart.

Step 1 — Locate Tools bar in Q4: The green (Tools) bar in the Q4 group reaches the value 80 Lakh on the y-axis.

Step 2 — Confirm: Tools values progression: Q1=60, Q2=70, Q3=75, Q4=80 (steadily increasing).

Why other options are wrong:

- (A) 60 Lakh — that is Q1 Tools value.
- (B) 70 Lakh — that is Q2 Tools value.
- (C) 75 Lakh — that is Q3 Tools value.

Final Answer: ☐ D — Rs. 80 Lakh.



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

5.

Solution

Concept: Sum all three products for Q2.

Step 1 — Q2 values: Widgets = 100, Gadgets = 90, Tools = 70.

Step 2 — Total: $100 + 90 + 70 = 260$ Lakh.

Why other options are wrong:

- (B) 295 Lakh — does not match any quarter total.
- (C) 300 Lakh — that is the Q3 total.
- (D) 285 Lakh — that is the Q4 total.

Final Answer: — Rs. 260 Lakh.

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

6.

Solution

Concept: Direct data reading from the exports table (2023 column).

Step 1 — 2023 Export values: India = \$500B, China = \$1350B, USA = \$950B, Germany = \$650B, Japan = \$400B.

Step 2 — Identify the maximum: China at \$1350B is the highest.

Why other options are wrong:

- (A) USA = \$950B $\ll$ \$1350B.
- (C) Germany = \$650B $\ll$ \$1350B.
- (D) India = \$500B $\ll$ \$1350B.

Final Answer: — China (\$1350B).

Answer: (B) [Go Back to Q 6](#)



7.

Solution**Concept:** Calculate the absolute change in exports for India.**Step 1 — Read India's exports:** 2022 = \$450B, 2023 = \$500B.**Step 2 — Compute growth:** $500 - 450 = \$50 \text{ Billion}$.**Why other options are wrong:**

- (A) \$30B — understates by \$20B.
- (B) \$40B — understates by \$10B.
- (D) \$60B — overstates by \$10B.

Final Answer: — \$50 Billion.**Answer:** (C) [Go Back to Q 7](#)

8.

Solution**Concept:** Sum 2022 exports for all five countries.**Step 1 — 2022 values:** India = 450, China = 1200, USA = 900, Germany = 600, Japan = 350.**Step 2 — Compute total:**

$$450 + 1200 + 900 + 600 + 350 = 3,500 \text{ Billion}$$

Verification: $(450 + 350) + (1200 + 600) + 900 = 800 + 1800 + 900 = 3,500$. ✓**Why other options are wrong:**

- (A) \$3,200B — short by \$300B.
- (B) \$3,350B — short by \$150B.
- (C) \$3,450B — short by \$50B.

Final Answer: — \$3,500B.**Answer:** (D) [Go Back to Q 8](#)

9.

Solution

Concept: Calculate absolute export growth (2023 – 2022) for each country.

Step 1 — Growth by country:

- India: $500 - 450 = \$50\text{B}$
- China: $1350 - 1200 = \$150\text{B}$
- USA: $950 - 900 = \$50\text{B}$
- Germany: $650 - 600 = \$50\text{B}$
- Japan: $400 - 350 = \$50\text{B}$

Step 2 — Identify maximum: China grew by \$150B, which is by far the highest.

Why other options are wrong:

- (B) India grew by only \$50B.
- (C) USA grew by only \$50B.
- (D) Germany grew by only \$50B.

Final Answer: — China (\$150B).

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

10.

Solution

Concept: Express a ratio in its simplest (lowest-terms) form.

Step 1 — Japan's exports: 2022 = \$350B, 2023 = \$400B.

Step 2 — Form the ratio: 350 : 400.

Step 3 — Simplify: $\text{gcd}(350, 400) = 50$, so

$$\frac{350}{50} : \frac{400}{50} = 7 : 8$$

Why other options are wrong:

- (A) 6:7 — does not simplify from 350:400.
- (C) 8:9 — implies values like 800:900; incorrect.
- (D) 3:4 — would require 300:400; Japan 2022 is 350, not 300.



Final Answer: — 7:8.

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

11.

Solution

Concept: Apply the given conditions sequentially to identify each person's position.

Step 1 — Assign positions from clues:

- Condition (i): $P \rightarrow$ Position 1.
- Condition (ii): Q immediately clockwise from P $\rightarrow$ Position 2.
- Condition (iii): R diametrically opposite P (position 1) $\rightarrow$ Position 4.
- Condition (iv): T immediately clockwise from R $\rightarrow$ Position 5.
- Condition (v): U immediately clockwise from T $\rightarrow$ Position 6.
- Remaining person S $\rightarrow$ Position 3 (only position left).

Step 2 — Final arrangement (clockwise): P(1), Q(2), S(3), R(4), T(5), U(6).

Answer to Q11: Position 3 is occupied by S.

Why other options are wrong: T is at position 5, Q is at position 2, U is at position 6.

Final Answer: — S.

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

12.

Solution

Concept: Use the established arrangement to find the person immediately clockwise from a given position.

Step 1 — Recall arrangement: P(1), Q(2), S(3), R(4), T(5), U(6).

Step 2 — Clockwise from position 4 (R): The next position clockwise is position 5 = T.

Why other options are wrong:

- (A) S is at position 3, which is counter-clockwise from R.
- (B) U is at position 6, two seats clockwise from R.



- (C) Q is at position 2, far from position 4.

Final Answer: — T.

Answer: (D) [Go Back to Q 12](#)

13.

Solution

Concept: In a 6-person circular table, diametrically opposite seats are 3 positions apart.

Step 1 — Q is at position 2.

Step 2 — Diametrically opposite: $2 + 3 = 5 \Rightarrow$ Position 5 = T.

Verification: Similarly, P(1) is opposite R(4) ($1 + 3 = 4$). ✓

Why other options are wrong:

- (B) S is at position 3, opposite position 6 (U), not position 2.
- (C) U is at position 6, opposite position 3 (S).
- (D) R is at position 4, opposite position 1 (P).

Final Answer: — T.

Answer: (A) [Go Back to Q 13](#)

14.

Solution

Concept: Counter-clockwise is the reverse of clockwise; it means the previous position.

Step 1 — U is at position 6.

Step 2 — Counter-clockwise from position 6: Previous position = $6 - 1 = 5 =$ T.

Why other options are wrong:

- (A) Q is at position 2 — not adjacent to U in the counter-clockwise direction.
- (C) S is at position 3.
- (D) P is at position 1.

Final Answer: — T.



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

15.

Solution

Concept: When two people swap seats, each takes the other's original position.

Step 1 — Original arrangement: P is at position 1, R is at position 4.

Step 2 — After swap: P moves to position 4, and R moves to position 1.

Step 3 — Who is at position 1 after the swap? R.

Why other options are wrong:

- (A) P moved to position 4 after the swap, not position 1.
- (B) Q remains at position 2 — unaffected.
- (D) S remains at position 3 — unaffected.

Final Answer: ☐ C — R.

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

16.

Solution

Concept: Trace family relations through the tree.

Step 1 — Identify the chain:

- A is the father; C is A's daughter.
- F married C $\Rightarrow$ F is C's husband.

Step 2 — Derive relation: Since C is A's daughter and F married C, F is A's **son-in-law**.

Why other options are wrong:

- (A) Son — B is the son; F is not A's biological son.
- (B) Brother — F belongs to a different family unit.
- (C) Father — F is a generation below A.

Final Answer: ☐ D — Son-in-law.

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



17.

Solution**Concept:** Trace two generations of parent-child links.**Step 1 — Identify the chain:**

- D is the mother; C is D's daughter.
- E is C's daughter $\Rightarrow$ E is D's **granddaughter**.

Why other options are wrong:

- (B) Daughter — C is D's daughter; E is a generation further below.
- (C) Niece — niece relationship requires a sibling of D as one parent.
- (D) Sister — E belongs to a generation below D.

Final Answer: — Granddaughter.**Answer: (A)** [Go Back to Q 17](#)

18.

Solution**Concept:** Count the direct children of A from the family structure.**Step 1 — A's children:** The problem states B (son) and C (daughter) are the children of A and D.**Step 2 — Count:** B and C $\Rightarrow$ **2 children**.**Why other options are wrong:**

- (A) 1 — A has two children, not one.
- (C) 3 — E is A's grandchild, not child.
- (D) 4 — only B and C are children of A.

Final Answer: — 2.**Answer: (B)** [Go Back to Q 18](#)

19.

Solution

Concept: Identify the relationship between a parent's sibling and the parent's child.

Step 1 — Trace the link:

- C is E's mother.
- B is C's brother (both are children of A and D).
- Therefore, B is the brother of E's mother C.

Step 2 — Conclusion: B is E's **uncle** (mother's brother).

Why other options are wrong:

- (A) Father — E's father is F, not B.
- (B) Cousin — cousins share a grandparent; B and E are one generation apart.
- (D) Brother — B and E are not siblings.

Final Answer: — Uncle.

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

20.

Solution

Concept: Direct reading of parent-child relationship from the family structure.

Step 1 — Family statement: B and C are the children of A (father) and D (mother).

Step 2 — C's father: Since A is the father and C is his daughter, **A is C's father.**

Why other options are wrong:

- (A) B — B is C's brother, not her father.
- (B) F — F is C's husband, not her father.
- (C) E — E is C's daughter, placing E a generation below C.

Final Answer: — A.

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



Answer Key

Answer Key — CAT DILR Sample Paper 13									
Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	B	3	C	4	D	5	A
6	B	7	C	8	D	9	A	10	B
11	C	12	D	13	A	14	B	15	C
16	D	17	A	18	B	19	C	20	D

Quick Reference:

Q No.	Answer	Q No.	Answer
1	A (Q3 — Rs. 300 Lakh)	11	C (S)
2	B (Rs. 350 Lakh)	12	D (T)
3	C (Widgets — Rs. 470 Lakh)	13	A (T)
4	D (Rs. 80 Lakh)	14	B (T)
5	A (Rs. 260 Lakh)	15	C (R)
6	B (China — \$1350B)	16	D (Son-in-law)
7	C (\$50 Billion)	17	A (Granddaughter)
8	D (\$3,500B)	18	B (2)
9	A (China — \$150B)	19	C (Uncle)
10	B (7:8)	20	D (A)

For more CAT sample papers, detailed solutions, and preparation resources, visit

collegedunia.com/exams/cat/sample-paper

