

CAT Data Interpretation & Logical Reasoning

Sample Paper – 17

Duration: 40 Minutes

Maximum Marks: 60

Instructions

- This paper contains **20 questions** across **4 sets** (2 Data Interpretation + 2 Logical Reasoning), modelled on the DILR section of **CAT**.
- Each correct answer carries **+3 marks**. There is a penalty of **–1 mark per wrong answer**; **0** marks for unattempted questions.
- All 20 questions are single-correct MCQ. Maximum Marks: **60**.
- **No personal calculators** are permitted; a basic on-screen calculator is provided in the actual CAT exam.
- **Rough sheets** are provided at the test centre. Each set has a common data/scenario; read it carefully before attempting the questions.

Set A: Data Interpretation — Monthly Product Sales (Q1 – Q5)

The table below shows the **monthly units sold** of four stationery products across four months.

Product	January	February	March	April
Pen	200	240	280	320
Pencil	150	130	170	190
Eraser	80	100	90	110
Ruler	60	80	100	120

Q1. What was the **total sales** of all four products combined in the month of **March**?

- (A) 640 units
- (B) 680 units
- (C) 600 units



(D) 720 units

Q2. Which product recorded the **highest sales** in the month of **February**?

(A) Eraser

(B) Pen

(C) Pencil

(D) Ruler

Q3. By what **percentage** did Ruler's sales **increase** from January to April?

(A) 75%

(B) 80%

(C) 100%

(D) 150%

Q4. In which **month** were Pencil's sales the **lowest**?

(A) January

(B) March

(C) April

(D) February

Q5. What was the **average monthly sales** of Pen across all four months?

(A) 260 units

(B) 240 units

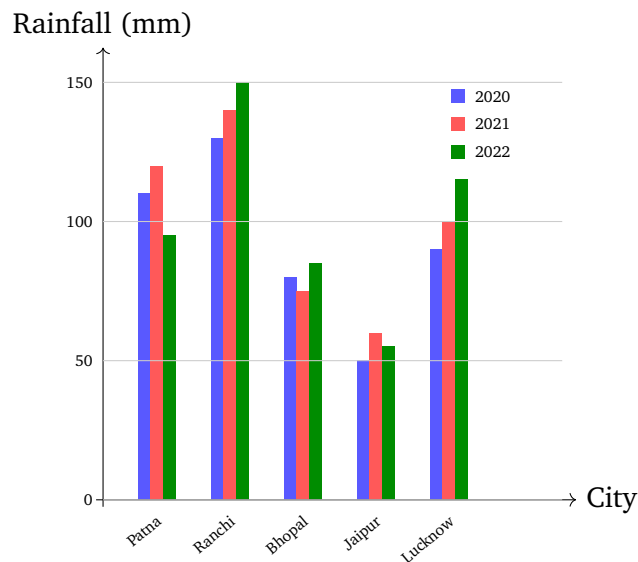
(C) 280 units

(D) 300 units

Set B: Data Interpretation — Annual City Rainfall (Q6 – Q10)

The grouped bar chart below shows the **annual rainfall (in mm)** recorded in five cities over three years.





Q6. Which city received the **highest rainfall** in the year **2021**?

- (A) Patna (120 mm)
- (B) Ranchi (140 mm)
- (C) Lucknow (100 mm)
- (D) Bhopal (75 mm)

Q7. What was the **average rainfall** across all five cities in the year **2020**?

- (A) 88 mm
- (B) 90 mm
- (C) 92 mm
- (D) 95 mm

Q8. Which city showed the **largest decrease** in rainfall from **2021 to 2022**?

- (A) Ranchi
- (B) Lucknow
- (C) Jaipur
- (D) Patna

Q9. By how many mm did **Lucknow's** rainfall increase from **2020 to 2022**?



- (A) 25 mm
- (B) 15 mm
- (C) 20 mm
- (D) 30 mm

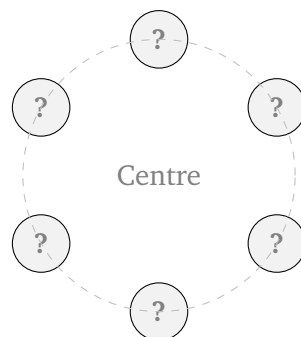
Q10. In which year was the **combined total rainfall** of all five cities the **highest**?

- (A) 2020
- (B) 2022
- (C) 2021
- (D) Equal in 2021 and 2022

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

Six employees — A, B, C, D, E, F — are seated around a circular table, all **facing the centre**. The following conditions apply:

- (i) A and D sit **exactly opposite** each other (3 seats apart).
- (ii) B sits **immediately to the left** of C (C is B's clockwise neighbour).
- (iii) E is **not adjacent** to D.
- (iv) Going **clockwise from A**, F appears before B.



Q11. Who sits **immediately to the right** of D (i.e., D's clockwise neighbour)?

- (A) C



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

Q12. How many people sit **between A and C** going **clockwise** from A (not counting A and C)?

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

Q13. Who sits **directly opposite** E?

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

Q14. Who sits **immediately to the left** of A (A's counter-clockwise neighbour)?

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

Q15. Which of the following pairs does **NOT** sit adjacent to each other?

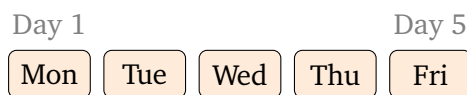
- (A) A and E
- (B) F and D
- (C) A and D
- (D) B and C



Set D: Logical Reasoning — Presentation Scheduling (Q16 – Q20)

Five researchers — L, M, N, O, P — each deliver exactly one presentation on a different day from **Monday to Friday** (one per day). The following conditions apply:

- (i) L presents on **Wednesday**.
- (ii) M presents **before** N (M's day is earlier in the week).
- (iii) O presents on **Monday or Friday**.
- (iv) P presents on the day **immediately after** M.
- (v) N does **NOT** present on Friday.



Q16. Based on the conditions above, who presents on **Friday**?

- (A) M
- (B) N
- (C) P
- (D) O

Q17. On which day does researcher **P** deliver the presentation?

- (A) Tuesday
- (B) Monday
- (C) Thursday
- (D) Friday

Q18. How many researchers present **between M and L** (exclusive, in day order)?

- (A) 0
- (B) 1



(C) 2

(D) 3

Q19. Who presents **immediately before O** (i.e., on the day just before O's day)?

(A) M

(B) P

(C) N

(D) L

Q20. If M's presentation is **cancelled**, which day will have **no presentation** scheduled?

(A) Friday

(B) Tuesday

(C) Thursday

(D) Monday



Detailed Solutions**Sol. 1.****Solution**

Concept — Column Summation: Add all values in the “March” column.

Step 1 — Read March sales values: Pen = 280, Pencil = 170, Eraser = 90, Ruler = 100.

Step 2 — Sum all values: $280 + 170 + 90 + 100 = 640$ units.

Why other options are wrong:

- Option B: 680 — over-counts; likely reads April value of Pen (320) instead of March (280).
- Option C: 600 — under-counts; possibly misreads Pencil as 130 (February value).
- Option D: 720 — significantly over-counts; mixes April values for multiple products.

Final Answer: Total March sales = 640 units $\Rightarrow$ **A**

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

Sol. 2.**Solution**

Concept — Maximum Value in a Row: Read the February column and identify the largest value.

Step 1 — Read February sales for all products: Pen = 240, Pencil = 130, Eraser = 100, Ruler = 80.

Step 2 — Identify the maximum: $240 > 130 > 100 > 80$. Pen has the highest February sales.

Why other options are wrong:

- Option A: Eraser (100) — third highest in February.
- Option C: Pencil (130) — second highest but well below Pen’s 240.
- Option D: Ruler (80) — the lowest in February.

Final Answer: Pen had the highest February sales $\Rightarrow$ **B**



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

Sol. 3.

Solution

Concept — Percentage Change: $\% \text{ change} = \frac{\text{New} - \text{Old}}{\text{Old}} \times 100.$

Step 1 — Identify Ruler's sales: January = 60 units; April = 120 units.

Step 2 — Calculate percentage increase:

$$\% \text{ increase} = \frac{120 - 60}{60} \times 100 = \frac{60}{60} \times 100 = 100\%$$

Why other options are wrong:

- Option A: 75% — would imply April value = $60 \times 1.75 = 105$, not 120.
- Option B: 80% — would imply April value = $60 \times 1.8 = 108$, not 120.
- Option D: 150% — would imply April value = $60 \times 2.5 = 150$, not 120.

Final Answer: Ruler's sales increased by 100% $\Rightarrow$ **C**

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

Sol. 4.

Solution

Concept — Minimum Value Identification: Scan all four months for Pencil's lowest value.

Step 1 — Read Pencil's monthly sales: January = 150, February = 130, March = 170, April = 190.

Step 2 — Identify the minimum: $130 < 150 < 170 < 190$. February (130) is the lowest.

Why other options are wrong:

- Option A: January (150) — higher than February's 130.
- Option B: March (170) — third highest, not the lowest.
- Option C: April (190) — the highest month for Pencil.

Final Answer: Pencil's sales were lowest in February $\Rightarrow$ **D**



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

Sol. 5.

Solution

Concept — Arithmetic Mean: $\text{Average} = \frac{\text{Sum of all values}}{\text{Number of months}}$.

Step 1 — Read Pen's monthly sales: January = 200, February = 240, March = 280, April = 320.

Step 2 — Calculate the average:

$$\text{Average} = \frac{200 + 240 + 280 + 320}{4} = \frac{1040}{4} = 260 \text{ units}$$

Why other options are wrong:

- Option B: 240 — this is just Pen's February value, not the average.
- Option C: 280 — this is just Pen's March value.
- Option D: 300 — over-estimates; would require a total of 1200 units.

Final Answer: Average monthly sales of Pen = 260 units $\Rightarrow$ **A**

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

Sol. 6.

Solution

Concept — Reading a Grouped Bar Chart: Identify the tallest red bar (2021) among all cities.

Step 1 — Read 2021 rainfall values: Patna = 120 mm, Ranchi = 140 mm, Bhopal = 75 mm, Jaipur = 60 mm, Lucknow = 100 mm.

Step 2 — Identify the maximum: $140 > 120 > 100 > 75 > 60$. Ranchi had the highest 2021 rainfall at 140 mm.

Why other options are wrong:

- Option A: Patna (120 mm) — second highest, below Ranchi.
- Option C: Lucknow (100 mm) — third highest.
- Option D: Bhopal (75 mm) — below the average.



Final Answer: Ranchi had the highest 2021 rainfall $\Rightarrow$ **B**

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

Sol. 7.

Solution

Concept — Arithmetic Mean: $\text{Average} = \frac{\text{Sum of 2020 values}}{5}$.

Step 1 — Read 2020 rainfall values (blue bars): Patna = 110, Ranchi = 130, Bhopal = 80, Jaipur = 50, Lucknow = 90.

Step 2 — Calculate average:

$$\text{Sum} = 110 + 130 + 80 + 50 + 90 = 460$$

$$\text{Average} = \frac{460}{5} = 92 \text{ mm}$$

Why other options are wrong:

- Option A: 88 mm — would need total = 440; undercount by 20.
- Option B: 90 mm — would need total = 450; undercount by 10.
- Option D: 95 mm — would need total = 475; overcounts by 15.

Final Answer: Average 2020 rainfall = 92 mm $\Rightarrow$ **C**

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

Sol. 8.

Solution

Concept — Identifying Maximum Decrease: Compute (2021 value – 2022 value) for each city; find the largest positive difference.

Step 1 — Compute the change from 2021 to 2022 for each city:

- Patna: $120 - 95 = 25$ mm decrease
- Ranchi: $140 - 150 = -10$ mm (increased)
- Bhopal: $75 - 85 = -10$ mm (increased)
- Jaipur: $60 - 55 = 5$ mm decrease
- Lucknow: $100 - 115 = -15$ mm (increased)



Step 2 — Identify the largest decrease: Patna (25 mm) > Jaipur (5 mm). Patna recorded the largest decrease.

Why other options are wrong:

- Option A: Ranchi — increased from 140 to 150 mm.
- Option B: Lucknow — increased from 100 to 115 mm.
- Option C: Jaipur — decreased by only 5 mm, far less than Patna's 25 mm.

Final Answer: Patna showed the largest decrease (–25 mm) $\Rightarrow$ **D**

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

Sol. 9.

Solution

Concept — Absolute Difference: Increase = 2022 value – 2020 value.

Step 1 — Read Lucknow's rainfall values: 2020 = 90 mm; 2022 = 115 mm.

Step 2 — Calculate the increase:

$$\text{Increase} = 115 - 90 = 25 \text{ mm}$$

Why other options are wrong:

- Option B: 15 mm — would mean 2022 = 105 mm, which is incorrect.
- Option C: 20 mm — would mean 2022 = 110 mm, which is incorrect.
- Option D: 30 mm — would mean 2022 = 120 mm, which is incorrect.

Final Answer: Lucknow's rainfall increased by 25 mm $\Rightarrow$ **A**

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

Sol. 10.

Solution

Concept — Comparing Column Sums: Sum all five cities' rainfall for each year.

Step 1 — Calculate total rainfall per year:

- 2020: $110 + 130 + 80 + 50 + 90 = 460 \text{ mm}$



- 2021: $120 + 140 + 75 + 60 + 100 = 495$ mm
- 2022: $95 + 150 + 85 + 55 + 115 = 500$ mm

Step 2 — Compare: $500 > 495 > 460$. Year 2022 had the highest combined rainfall.

Why other options are wrong:

- Option A: 2020 — lowest combined total at 460 mm.
- Option C: 2021 — intermediate at 495 mm, not the highest.
- Option D: Equal in 2021 and 2022 — 2022 (500) exceeds 2021 (495) by 5 mm.

Final Answer: 2022 had the highest combined total rainfall $\Rightarrow$ **B**

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

Sol. 11.

Solution

Concept — Circular Arrangement Deduction: Apply each condition to uniquely determine the seating.

Step 1 — Apply condition (i): A and D are opposite. Fix A at position 1 (clockwise numbering), so D = position 4.

Step 2 — Apply conditions (ii) and (iv): B is immediately left of C means C = B's clockwise neighbour. Going clockwise from A, F appears before B. Remaining positions 2,3,5,6 for B,C,E,F.

Step 3 — Apply condition (iii) (E not adjacent to D): D is at position 4; its neighbours are positions 3 and 5. So $E \neq 3$ and $E \neq 5$. E must be at position 2 or 6.

Step 4 — Resolve: Try $E=2$. Then F, B, C occupy positions 3, 5, 6. F before B clockwise from A means F at 3 or 5 (before B). If $F=3$, $B=5$, $C=6$: C(6) is B(5)'s clockwise neighbour ✓. Check: E(2) not adjacent to D(4) ✓ (E adj to A and F only). **Final arrangement (clockwise):** A(1), E(2), F(3), D(4), B(5), C(6).

D's clockwise neighbour (right) = position 5 = B.

Why other options are wrong:

- Option A: C — C is at position 6, which is D's counter-clockwise side neigh-



hour after B.

- Option B: F — F is at position 3, to D's left (counter-clockwise).
- Option D: E — E is at position 2, two seats away from D.

Final Answer: B sits immediately to the right of D $\Rightarrow$ C

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

Sol. 12.

Solution

Concept — Counting People Between Two Seats (Clockwise): Arrangement: A(1), E(2), F(3), D(4), B(5), C(6).

Step 1 — Trace clockwise from A(1) to C(6): A(1) $\rightarrow$ E(2) $\rightarrow$ F(3) $\rightarrow$ D(4) $\rightarrow$ B(5) $\rightarrow$ C(6).

Step 2 — Count people strictly between A and C (exclusive): E, F, D, B = 4 people.

Why other options are wrong:

- Option A: 2 — significantly under-counts the four intermediate people.
- Option B: 3 — misses one of the four intermediate people.
- Option C: 5 — would require going the short way around (only C's neighbour A would be between), which is 0 in that direction. 5 would exceed the total number of others between two fixed points in a 6-person circle.

Final Answer: 4 people sit between A and C (clockwise) $\Rightarrow$ D

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

Sol. 13.

Solution

Concept — Opposite Seat in a 6-Person Circle: In a 6-person circle, the person directly opposite seat k is at seat $k + 3 \pmod{6}$.

Step 1 — Identify E's position: E is at position 2.

Step 2 — Find the opposite position: Opposite of position 2 = position $2 + 3 = 5$ = B.



Why other options are wrong:

- Option B: C (position 6) — opposite of position 6 is position 3 (F), not E.
- Option C: D (position 4) — opposite of position 4 is position 1 (A), not E.
- Option D: F (position 3) — opposite of position 3 is position 6 (C), not E.

Final Answer: B sits directly opposite E $\Rightarrow$ A

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

Sol. 14.

Solution

Concept — Counter-Clockwise Neighbour: The person immediately to the left of seat k (counter-clockwise) is at seat $k - 1$ (or seat 6 if $k = 1$).

Step 1 — Identify A's position: A is at position 1.

Step 2 — Find the counter-clockwise (left) neighbour: Counter-clockwise from position 1 = position 6 = C.

Why other options are wrong:

- Option A: E (position 2) — E is immediately to the *right* (clockwise) of A.
- Option C: B (position 5) — B is two seats counter-clockwise from A.
- Option D: F (position 3) — F is three seats away from A, not adjacent.

Final Answer: C sits immediately to the left of A $\Rightarrow$ B

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

Sol. 15.

Solution

Concept — Adjacency Check: Two people are adjacent if their seat positions differ by exactly 1 (or are positions 1 and 6 in a 6-seat circle).

Step 1 — Check each option:

- (A, E): positions (1, 2) — difference = 1 $\Rightarrow$ **Adjacent**
- (F, D): positions (3, 4) — difference = 1 $\Rightarrow$ **Adjacent**
- (A, D): positions (1, 4) — difference = 3 $\Rightarrow$ **NOT Adjacent** (they are oppo-



site!)

- (B, C): positions (5, 6) — difference = 1 $\Rightarrow$ **Adjacent**

Step 2 — Identify the non-adjacent pair: A and D are 3 seats apart, sitting directly opposite each other — the maximum possible distance in a 6-person circle.

Why other options are wrong:

- Option A: (A, E) — adjacent at positions 1 and 2.
- Option B: (F, D) — adjacent at positions 3 and 4.
- Option D: (B, C) — adjacent at positions 5 and 6.

Final Answer: A and D do not sit adjacent to each other $\Rightarrow$ C

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

Sol. 16.

Solution

Concept — Deductive Scheduling: Assign each researcher to a unique day (Mon–Fri) satisfying all conditions.

Step 1 — Apply fixed assignments: From (i): L = Wednesday.

Step 2 — Determine O's day using condition (iii): If O = Monday: remaining days Tue, Thu, Fri for M, N, P. Consecutive pair from {Tue, Thu, Fri} = (Thu, Fri). So M = Thu, P = Fri. Then N = Tue. Check (ii): M(Thu) before N(Tue)? No, Thu > Tue — violates condition (ii). Therefore O $\neq$ Monday $\Rightarrow$ **O = Friday**.

Step 3 — Assign remaining days Mon, Tue, Thu to M, N, P: Consecutive pair from {Mon, Tue, Thu} = (Mon, Tue). So M = Mon, P = Tue. Then N = Thu. Check (ii): M(Mon) < N(Thu) $\checkmark$; Check (v): N = Thu $\neq$ Fri $\checkmark$.

Final schedule: M=Mon, P=Tue, L=Wed, N=Thu, O=Fri.

Why other options are wrong:

- Option A: M — M presents on Monday, not Friday.
- Option B: N — N presents on Thursday.
- Option C: P — P presents on Tuesday.

Final Answer: O presents on Friday $\Rightarrow$ D

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



Sol. 17.

Solution

Concept — Reading the Derived Schedule: M=Mon, P=Tue, L=Wed, N=Thu, O=Fri.

Step 1 — Locate P's day: P is assigned to **Tuesday**.

Step 2 — Verify: Condition (iv): P presents immediately after M (Monday → Tuesday) ✓.

Why other options are wrong:

- Option B: Monday — Monday belongs to M.
- Option C: Thursday — Thursday belongs to N.
- Option D: Friday — Friday belongs to O.

Final Answer: P presents on Tuesday ⇒ A

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

Sol. 18.

Solution

Concept — Counting People Between Two Days: M = Monday (Day 1), L = Wednesday (Day 3). Count researchers with days strictly between Mon and Wed.

Step 1 — Identify the day between Monday and Wednesday: Only Tuesday lies strictly between Monday and Wednesday.

Step 2 — Who presents on Tuesday? P presents on Tuesday ⇒ **1 researcher** is between M and L.

Why other options are wrong:

- Option A: 0 — would require M and L to be on consecutive days, but Mon and Wed have Tuesday between them.
- Option C: 2 — would require two days between Mon and Wed; only one day (Tue) exists.
- Option D: 3 — a significant overcount.

Final Answer: 1 researcher (P) presents between M and L ⇒ B

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



Sol. 19.

Solution

Concept — Immediate Predecessor: The researcher “immediately before O” presents on the day just before O’s day.

Step 1 — Identify O’s day: O = Friday.

Step 2 — Identify the day immediately before Friday: Thursday. From the schedule: N presents on Thursday.

Why other options are wrong:

- Option A: M — M presents on Monday, four days before Friday.
- Option B: P — P presents on Tuesday, three days before Friday.
- Option D: L — L presents on Wednesday, two days before Friday.

Final Answer: N presents immediately before O $\Rightarrow$ **C**

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

Sol. 20.

Solution

Concept — Effect of Removing One Entry: If M’s presentation is cancelled, identify which day loses its assigned presenter.

Step 1 — Recall the complete schedule: M=Mon, P=Tue, L=Wed, N=Thu, O=Fri.

Step 2 — Remove M from the schedule: Remaining presentations: P(Tue), L(Wed), N(Thu), O(Fri). **Monday** has no presentation.

Why other options are wrong:

- Option A: Friday — O still presents on Friday.
- Option B: Tuesday — P still presents on Tuesday.
- Option C: Thursday — N still presents on Thursday.

Final Answer: Monday will have no presentation after M’s cancellation $\Rightarrow$ **D**

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



Answer Key

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: Correct Answers

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

Practice more CAT Sample Papers at collegedunia.com/exams/cat/sample-paper

