

MH CET LAW Logical & Analytical Reasoning

Sample Paper – 4

Duration: 24 Minutes

Maximum Marks: 30

Instructions

- This paper contains **30** Multiple Choice Questions modelled on the Logical & Analytical Reasoning section of **MH CET LAW**.
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct per question. Choose carefully.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Questions

Q1. What comes next in the series: 7, 12, 19, 28, 39, ?

- (A) 48
- (B) 49
- (C) 51
- (D) 52

Q2. What is the missing letter in the series: P, N, L, J, H, ?

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

Q3. What comes next in the series: 7, 14, 28, 56, 112, ?



- (A) 196
- (B) 224
- (C) 210
- (D) 252

Q4. In a certain coding system, if $\text{GOOD} = 41$, what is the value of FOOD using the same system? (Each letter is replaced by its position in the alphabet: $A=1, B=2, \dots, Z=26$.)

- (A) 41
- (B) 39
- (C) 40
- (D) 38

Q5. Using the same coding system where each letter equals its alphabet position and the value is the sum of all letter positions, if $\text{COLD} = 34$, what is the value of WARM ?

- (A) 53
- (B) 54
- (C) 56
- (D) 55

Q6. Seema is Vikram's wife. Tarun is Seema's son. Priya is Tarun's sister. How is Vikram related to Priya?

- (A) Father
- (B) Uncle



- (C) Brother
- (D) Grandfather

Q7. Kiran is Manju's son. Manju is Rajan's daughter. How is Rajan related to Kiran?

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

Q8. Starting from point A and facing South, Deepa walks 5 m, then turns left and walks 3 m, then turns left again and walks 5 m. In which direction does she now face?

- (A) West
- (B) South
- (C) North
- (D) East

Q9. A is 10 m to the East of B. C is 10 m to the North of A. D is 10 m to the West of C. In which direction is D with respect to B?

- (A) East
- (B) South
- (C) West
- (D) North



Q10. Statements:

All desks are chairs.

Some chairs are tables.

Conclusions:

I. Some desks are tables.

II. Some tables are chairs.

(A) Only Conclusion II follows

(B) Only Conclusion I follows

(C) Both Conclusions follow

(D) Neither Conclusion follows

Q11. Statements:

No river is a lake.

All lakes are ponds.

Conclusions:

I. No river is a pond.

II. Some ponds are not rivers.

(A) Only Conclusion I follows

(B) Only Conclusion II follows

(C) Both Conclusions follow

(D) Neither Conclusion follows

Q12. Statements:

Some students are athletes.

All athletes are healthy.

Conclusions:

- I. Some students are healthy.
- II. All healthy people are students.

- (A) Only Conclusion II follows
- (B) Neither Conclusion follows
- (C) Only Conclusion I follows
- (D) Both Conclusions follow

Q13. Statement: “Children who sleep less than 8 hours a night have difficulty concentrating in school.”

Conclusions:

- I. Adequate sleep is important for children’s school performance.
- II. Children should sleep at least 8 hours a night.

- (A) Only Conclusion I follows
- (B) Only Conclusion II follows
- (C) Neither Conclusion follows
- (D) Both Conclusions follow

Q14. Statement: “We regret to inform you that your application for the loan has been rejected.”

Assumptions:

- I. The applicant had applied for a loan.
- II. Loan rejections are always communicated formally in writing.

- (A) Only Assumption I is implicit



- (B) Only Assumption II is implicit
- (C) Both Assumptions are implicit
- (D) Neither Assumption is implicit

Q15. Statement: “Should higher education be made completely free in India?”

Arguments:

- I. Yes — education is a luxury reserved only for the privileged.
- II. No — it would significantly strain public finances without guaranteeing quality improvement.

- (A) Only Argument I is strong
- (B) Only Argument II is strong
- (C) Both Arguments are strong
- (D) Neither Argument is strong

Q16. Problem: A pharmaceutical company has been found selling substandard medicines.

Courses of Action:

- I. Stop all medicine manufacturing permanently across the entire country.
- II. Conduct a detailed inspection, suspend the company’s licence, and initiate legal proceedings.

- (A) Only Course I should be followed
- (B) Both Courses should be followed
- (C) Only Course II should be followed



(D) Neither Course should be followed

Q17. Five persons — P, Q, R, S, and T — are seated in a straight row. T is at the leftmost end and R is at the rightmost end. S is seated between Q and T. P is immediately to the right of Q. What is P's position from the right end?

(A) 1st

(B) 3rd

(C) 4th

(D) 2nd

Q18. Six persons — F, G, H, I, J, and K — are seated around a circular table facing the centre. G is the reference point. F is immediately to the right of G. H is directly opposite F. I is immediately to the right of H. J is directly opposite G. K occupies the remaining position. Who is sitting directly opposite G?

(A) J

(B) K

(C) H

(D) I

Q19. Five books — A, B, C, D, and E — are priced differently. E is the most expensive. B costs more than A. D costs more than C. A costs more than C. B costs more than D. D costs more than A. Which book is the **third most expensive**?



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

Q20. Bud : Flower :: Egg : ?

- (A) Shell
- (B) Nest
- (C) Chick
- (D) Hen

Q21. 25 : 5 :: 49 : ?

- (A) 5
- (B) 6
- (C) 8
- (D) 7

Q22. Find the odd one out:

Iron, Copper, Gold, Wood, Silver

- (A) Wood
- (B) Gold
- (C) Iron
- (D) Silver

Q23. Find the odd one out:

4, 8, 12, 18, 16



- (A) 4
- (B) 18
- (C) 8
- (D) 16

Q24. Observation: Students' attendance at an online school dropped suddenly for two continuous weeks. Which of the following is the **most likely cause** of this sudden drop?

- (A) The school's building was repainted during those two weeks.
- (B) New textbooks were distributed to students.
- (C) The school's online platform experienced technical outages for several days.
- (D) A new library section was added to the school.

Q25. Statement: "All employees who attended the motivational workshop reported a significant improvement in their work satisfaction."

Which of the following is the **strongest conclusion** that can be drawn from this statement?

- (A) All companies should immediately conduct mandatory motivational workshops.
- (B) Motivational workshops are the only way to improve work satisfaction.
- (C) Employees who did not attend the workshop are dissatisfied with their jobs.



(D) Attending the motivational workshop was associated with improved work satisfaction among these employees.

Q26. Event I: A severe water shortage was declared in the district.
Event II: Residents began stockpiling large quantities of drinking water.

What is the relationship between the two events?

- (A) Event I is the cause and Event II is the effect.
- (B) Event II is the cause and Event I is the effect.
- (C) Both events are independent of each other.
- (D) Both events are effects of a common cause.

Q27. What is the angle between the hour hand and the minute hand of a clock at **3:00**?

- (A) 80°
- (B) 90°
- (C) 120°
- (D) 60°

Q28. If '@' means '+', '#' means '×', '\$' means '−', and '!' means '÷', then what is the value of:

$$24 ! 6 @ 3 \# 4 \$ 2 = ?$$

- (A) 10
- (B) 12
- (C) 14



(D) 16

Q29. Question: What is the value of $x + y$?

Statement 1: $x - y = 4$

Statement 2: $x = 6$

- (A) Statement 1 alone is sufficient to answer the question.
- (B) Statement 2 alone is sufficient to answer the question.
- (C) Either statement alone is sufficient to answer the question.
- (D) Both statements together are needed to answer the question.

Q30. In a class of 50 students, 30 like Mathematics, 25 like Science, and 10 like both subjects. In the Venn diagram representing this data, the region that lies **outside both circles** represents students who:

- (A) Like neither Mathematics nor Science
- (B) Like only Mathematics
- (C) Like both subjects
- (D) Like only Science



Detailed Solutions**Q1.****Solution**

The series is: 7, 12, 19, 28, 39, ?

Find the differences between consecutive terms:

$$12 - 7 = 5$$

$$19 - 12 = 7$$

$$28 - 19 = 9$$

$$39 - 28 = 11$$

The differences form an arithmetic sequence: 5, 7, 9, 11, ... (increasing by 2 each time).

$$\text{The next difference} = 11 + 2 = 13.$$

$$\text{Therefore, the next term} = 39 + 13 = \mathbf{52}.$$

Answer: (D)**Q2.****Solution**

The series is: P, N, L, J, H, ?

Examine the pattern by noting alphabet positions:

$$P = 16, N = 14, L = 12, J = 10, H = 8$$

Each term decreases by 2 positions in the alphabet.

$$\text{Next term} = 8 - 2 = 6, \text{ which corresponds to the letter } \mathbf{F}.$$

Answer: (A)**Q3.****Solution**

The series is: 7, 14, 28, 56, 112, ?

Each term is obtained by multiplying the previous term by 2:

$$7 \times 2 = 14$$

$$14 \times 2 = 28$$

$$28 \times 2 = 56$$

$$56 \times 2 = 112$$

$$112 \times 2 = \mathbf{224}$$

Answer: (B)**Q4.**

Solution

The coding system assigns each letter its position in the alphabet ($A=1, B=2, \dots, Z=26$) and sums the values.

Verify with GOOD:

$$G = 7, O = 15, O = 15, D = 4$$

$$7 + 15 + 15 + 4 = 41 \checkmark$$

Now calculate FOOD:

$$F = 6, O = 15, O = 15, D = 4$$

$$6 + 15 + 15 + 4 = 40$$

Answer: (C)

Q5.

Solution

Using the same system (sum of alphabet position values):

Verify with COLD:

$$C = 3, O = 15, L = 12, D = 4$$

$$3 + 15 + 12 + 4 = 34 \checkmark$$

Now calculate WARM:

$$W = 23, A = 1, R = 18, M = 13$$

$$23 + 1 + 18 + 13 = 55$$

Answer: (D)

Solution

Mapping the relationships:

- Q6.**
- Seema is Vikram's wife $\Rightarrow$ Vikram and Seema are a married couple.
 - Tarun is Seema's son $\Rightarrow$ Tarun is also Vikram's son.
 - Priya is Tarun's sister $\Rightarrow$ Priya is the daughter of Seema and Vikram.

Therefore, Vikram is Priya's **Father**.

Answer: (A)

Solution

Mapping the relationships:

- Q7.**
- Kiran is Manju's son $\Rightarrow$ Manju is Kiran's mother.
 - Manju is Rajan's daughter $\Rightarrow$ Rajan is Manju's father.



Since Rajan is the father of Kiran's mother, Rajan is Kiran's **Grandfather** (maternal grandfather).

Answer: (B)

Solution

Trace Deepa's movements step by step, starting at point A facing South:

- Q8.** (a) Walks 5 m South (now 5 m south of A, facing South).
- (b) Turns left — when facing South, turning left means facing **East**. Walks 3 m East.
- (c) Turns left again — when facing East, turning left means facing **North**. Walks 5 m North.

After the third segment, Deepa has returned to the same North-South level as point A and is 3 m to the East. She is currently **facing North**.

Answer: (C)

Solution

Assign coordinates with B at the origin:

- Q9.**
- $B = (0, 0)$
 - A is 10 m East of B $\Rightarrow A = (10, 0)$
 - C is 10 m North of A $\Rightarrow C = (10, 10)$
 - D is 10 m West of C $\Rightarrow D = (0, 10)$

$D = (0, 10)$ and $B = (0, 0)$. Since D has the same x-coordinate as B but a greater y-coordinate, D is directly **North** of B.

Answer: (D)

Solution

Premises:

- Q10.** (a) All desks are chairs.
- (b) Some chairs are tables.

Conclusion I — Some desks are tables:

The chairs that are also tables may or may not include the desks. There is no guarantee that the “desk-chairs” overlap with the “table-chairs”. Conclusion I does *not necessarily* follow.



Conclusion II — Some tables are chairs:

This is the converse of Premise 2 (“Some chairs are tables” $\Leftrightarrow$ “Some tables are chairs”). This is a valid conversion and **follows**.

Therefore, **Only Conclusion II follows**.

Answer: (A)

Solution**Premises:**

Q11. (a) No river is a lake.

(b) All lakes are ponds.

Conclusion I — No river is a pond:

While no river is a lake, there may be ponds that are not lakes (some ponds could also be rivers through a different path). Conclusion I is too strong and does *not necessarily* follow.

Conclusion II — Some ponds are not rivers:

From Premise 2, all lakes are ponds. From Premise 1, no river is a lake. Therefore those lakes (which are ponds) are definitely not rivers. Hence, some ponds (the lake-ponds) are not rivers. Conclusion II **follows**.

Therefore, **Only Conclusion II follows**.

Answer: (B)

Solution**Premises:**

Q12. (a) Some students are athletes.

(b) All athletes are healthy.

Conclusion I — Some students are healthy:

Since some students are athletes (Premise 1) and all athletes are healthy (Premise 2), those students who are athletes are also healthy. Therefore, some students are healthy. Conclusion I **follows**.

Conclusion II — All healthy people are students:

Premise 2 says all athletes are healthy, but healthy people can include non-students (e.g., healthy athletes who are not students). Conclusion II does *not* follow.

Therefore, **Only Conclusion I follows**.



Answer: (C)

Q13.

Solution

Statement: Children who sleep less than 8 hours a night have difficulty concentrating in school.

Conclusion I — Adequate sleep is important for children's school performance:

The statement directly implies that insufficient sleep impairs concentration. This is a reasonable inference that adequate sleep supports school performance. Conclusion I follows.

Conclusion II — Children should sleep at least 8 hours a night:

The statement uses 8 hours as a threshold below which concentration suffers. It is a natural and logical recommendation that children should sleep at least 8 hours. Conclusion II follows.

Therefore, **Both Conclusions follow.**

Answer: (D)

Q14.

Solution

Statement: "We regret to inform you that your application for the loan has been rejected."

Assumption I — The applicant had applied for a loan:

The statement explicitly references "your application for the loan." It is inherently assumed that the applicant had indeed submitted an application. This assumption is **implicit** (it is taken for granted).

Assumption II — Loan rejections are always communicated formally in writing:

The statement is a specific communication in this instance; it does not establish a universal rule about how all rejections are communicated. This assumption is *not implicit*.

Therefore, **Only Assumption I is implicit.**

Answer: (A)

Q15.

Solution

Statement: Should higher education be made completely free in India?

Argument I — Yes, because education is a luxury reserved only for the privi-



leged:

This argument rests on a flawed premise. Education is considered a right, not a luxury, and framing it purely as a privilege of the wealthy is an oversimplification. Argument I is **weak**.

Argument II — No, it would significantly strain public finances without guaranteeing quality improvement:

This raises a substantive, practical concern about economic feasibility and outcomes. It is a well-reasoned position addressing both cost and effectiveness. Argument II is **strong**.

Therefore, **Only Argument II is strong**.

Answer: (B)

Q16.

Solution

Problem: A pharmaceutical company has been found selling substandard medicines.

Course I — Stop all medicine manufacturing permanently across the entire country:

This is an extreme and disproportionate response. Punishing the entire country's pharmaceutical manufacturing for the wrongdoing of one company is neither fair nor practical. Course I is **not appropriate**.

Course II — Conduct a detailed inspection, suspend the company's licence, and initiate legal proceedings:

This is a measured, targeted, and legally sound response. It addresses the specific wrongdoing, protects public health, and holds the company accountable. Course II is **appropriate**.

Therefore, **Only Course II should be followed**.

Answer: (C)

Solution

Place the five persons using the given clues:

- Q17.**
- T is at the leftmost end $\Rightarrow$ Position 1: T.
 - R is at the rightmost end $\Rightarrow$ Position 5: R.
 - S is between Q and T. Since T is at position 1, S must be at position 2 and Q at position 3 (so S is between them).
 - P is immediately to the right of Q $\Rightarrow$ Q at position 3, P at position 4.



Final arrangement (left to right):

T(1) – S(2) – Q(3) – P(4) – R(5)

P is at position 4 from the left. From the right end, P is at position $5 - 4 + 1 = 2\text{nd}$.

Answer: (D)

Solution

Six persons sit around a circular table facing the centre. Number positions 1 to 6 clockwise:

- Q18.**
- G is the reference point $\Rightarrow G = \text{Position 1}$.
 - F is immediately to the right of G $\Rightarrow F = \text{Position 2}$.
 - H is directly opposite F. In a 6-person circle, the seat opposite position 2 is position 5 $\Rightarrow H = \text{Position 5}$.
 - I is immediately to the right of H $\Rightarrow I = \text{Position 6}$.
 - J is directly opposite G. The seat opposite position 1 is position 4 $\Rightarrow J = \text{Position 4}$.
 - K occupies the remaining position $\Rightarrow K = \text{Position 3}$.

Clockwise arrangement: G(1) – F(2) – K(3) – J(4) – H(5) – I(6)

The person directly opposite G (position 1) is at position 4, which is J.

Answer: (A)

Solution

List the given conditions:

- Q19.**
- E is the most expensive $\Rightarrow E$ is 1st.
 - B costs more than A.
 - D costs more than C.
 - A costs more than C.
 - B costs more than D.
 - D costs more than A.

Combining: $E > B > D > A > C$

Verification:



- $B > A$ ✓ ($B > D > A$)
- $D > C$ ✓ ($D > A > C$)
- $A > C$ ✓
- $B > D$ ✓
- $D > A$ ✓

The ranking from most to least expensive: E (1st), B (2nd), D (3rd), A (4th), C (5th).

The **3rd most expensive** book is **D**.

Answer: (B)

Q20.

Solution

Identify the relationship in the given pair:

Bud : Flower — A bud is the early developmental stage that grows into a Flower.

Applying the same relationship to Egg:

An egg is the early developmental stage that hatches into a **Chick**.

(Note: Option D — Hen — is what the chick eventually grows into, not what the egg directly develops into.)

Answer: (C)

Q21.

Solution

Identify the relationship in the given pair:

25 : 5 — $25 = 5^2$, so $\sqrt{25} = 5$.

Applying the same relationship to 49:

$49 = 7^2$, so $\sqrt{49} = 7$.

Answer: (D)

Solution

Examine each item:

Q22.

- Iron — a metal ✓
- Copper — a metal ✓



- Gold — a metal ✓
- Wood — **not a metal**; it is a natural plant-based material
- Silver — a metal ✓

All items except **Wood** are metals. Wood is the odd one out.

Answer: (A)

Solution

Check which numbers are multiples of 4:

- Q23.
- $4 = 4 \times 1$ ✓
 - $8 = 4 \times 2$ ✓
 - $12 = 4 \times 3$ ✓
 - $18 = ?$ $18 \div 4 = 4.5$ — **not a multiple of 4**
 - $16 = 4 \times 4$ ✓

All numbers except **18** are multiples of 4. Therefore, 18 is the odd one out.

Answer: (B)

Solution

Observation: Students' attendance at an online school dropped suddenly for two continuous weeks.

Evaluate each option:

- Q24.
- (A) Repainting the school building would not affect an *online* school's attendance.
- (B) Distributing new textbooks would not cause a drop in attendance; it might actually increase engagement.
- (C) **Technical outages on the online platform** directly prevent students from accessing and attending online classes, making this the most likely and direct cause of a sudden, prolonged attendance drop.
- (D) Adding a library section would not cause online attendance to drop.

The most likely cause is (C) — **technical outages on the online platform**.

Answer: (C)



Solution

Statement: All employees who attended the motivational workshop reported a significant improvement in their work satisfaction.

Evaluate each conclusion:

- Q25.** (A) Too broad — the statement is about one group's experience, not a prescription for all companies.
- (B) Unsupported — the statement does not say workshops are the *only* method.
- (C) Unsupported — the statement says nothing about those who did not attend.
- (D) **Directly supported** — this conclusion accurately and cautiously restates what the statement observes: attendance was associated with improved satisfaction for these specific employees.

The strongest conclusion is **(D)**.

Answer: (D)

Solution

Event I: A severe water shortage was declared in the district.

Event II: Residents began stockpiling large quantities of drinking water.

Analysis:

- Q26.**
- A water shortage announcement creates fear of scarcity among residents.
 - In response to the declared shortage, residents rationally begin to stockpile water to ensure their supply.
 - Event II (stockpiling) is clearly a **reaction** to Event I (shortage declaration).

Therefore, **Event I is the cause and Event II is the effect.**

Answer: (A)

Solution

At 3:00:

- Q27.**
- The **minute hand** points to 12, which is at 0° (taking 12 o'clock as the reference point 0°).
 - The **hour hand** points to 3, which is at $\frac{3}{12} \times 360^\circ = \frac{1}{4} \times 360^\circ = 90^\circ$.

The angle between the two hands = $90^\circ - 0^\circ = 90^\circ$.

Answer: (B)



Solution

Substitute the symbols with their actual operations:

- Q28.**
- '!' means $\div$
 - '@' means $+$
 - '#' means $\times$
 - '\$' means $-$

Expression: $24 ! 6 @ 3 \# 4 \$ 2$

After substitution: $24 \div 6 + 3 \times 4 - 2$

Apply BODMAS (Division and Multiplication before Addition and Subtraction):

$$24 \div 6 = 4$$

$$3 \times 4 = 12$$

$$4 + 12 - 2 = 14$$

Answer: (C)

Q29.

Solution

Question: What is the value of $x + y$?

Using Statement 1 alone ($x - y = 4$):

This gives infinitely many solutions (e.g., $x = 5, y = 1$ or $x = 6, y = 2$). The value of $x + y$ cannot be determined uniquely. **Insufficient.**

Using Statement 2 alone ($x = 6$):

We know $x = 6$ but y is unknown. The value of $x + y$ cannot be determined. **Insufficient.**

Using both statements together:

From Statement 2: $x = 6$.

Substituting into Statement 1: $6 - y = 4 \Rightarrow y = 2$.

Therefore $x + y = 6 + 2 = 8$. **Sufficient.**

Both statements together are needed.

Answer: (D)

Solution

In the class of 50 students:

- Q30.**
- 30 like Mathematics (represented by circle M)



- 25 like Science (represented by circle S)
- 10 like both (the overlapping region)

Students who like at least one subject = $30 + 25 - 10 = 45$.

Students who like **neither** subject = $50 - 45 = 5$.

In the Venn diagram, the region **outside both circles** represents students who belong to neither set — i.e., students who **like neither Mathematics nor Science**.

Answer: (A)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	D	2	A	3	B	4	C	5	D
6	A	7	B	8	C	9	D	10	A
11	B	12	C	13	D	14	A	15	B
16	C	17	D	18	A	19	B	20	C
21	D	22	A	23	B	24	C	25	D
26	A	27	B	28	C	29	D	30	A

