

MH CET LAW Logical & Analytical Reasoning

Sample Paper – 10

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.

1. Find the missing number in the series:

10, 13, 18, 25, 34, ?

- A) 43
- B) 45
- C) 47
- D) 49

2. Find the next letter in the series:

B, D, H, N, V, ?

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



3. Find the missing number in the series:

2, 2, 4, 12, 48, ?

A) 120

B) 144

C) 192

D) 240

4. In a certain code language, adjacent letter-pairs in a word are swapped (pair 1 swaps, pair 2 swaps, and so on; a lone final letter stays in place). If **DANCE** is coded as **ADCNE**, how is **MONEY** coded?

A) MONYE

B) NMYOE

C) OMENY

D) MNOYA

5. If the value of a word is the sum of the positional values of its letters (A= 1, B= 2, ..., Z= 26), and **CHAIR** = 39, what is the value of **CHARM**?

A) 41

B) 43

C) 45

D) 47

6. Pointing to Rohan, Sapna says, "He is the son of the only son of my grandmother." How is Sapna related to Rohan?

A) Sister

B) Cousin

C) Mother

D) Aunt



7. A is B's mother. C is B's only sibling. D is C's grandfather. What is A's relation to D?
- A) Mother
B) Daughter
C) Sister
D) Daughter-in-law
8. Tarun walks 10 m South, turns right and walks 10 m, turns right again and walks 10 m, then turns right and walks 5 m. How far is he from his starting point?
- A) 10 m
B) 15 m
C) 5 m
D) 20 m
9. Uma faces West. She turns right and walks 4 m, then turns right again and walks 3 m. In which direction is she now moving?
- A) West
B) East
C) North
D) South
10. **Statements:**
- All mangoes are sweet.
 - All sweet things are delicious.

Conclusions:

- I. All mangoes are delicious.
II. All delicious things are mangoes.

Which of the above conclusions follow?



- A) Only Conclusion I follows
- B) Only Conclusion II follows
- C) Both I and II follow
- D) Neither I nor II follows

11. Statements:

- Some apples are red.
- Some red things are beautiful.

Conclusions:

- I. Some apples are beautiful.
- II. All beautiful things are apples.

Which of the above conclusions follow?

- A) Both I and II follow
- B) Only Conclusion I follows
- C) Only Conclusion II follows
- D) Neither I nor II follows

12. Statements:

- All swans are white.
- Some white things are birds.

Conclusions:

- I. Some swans are birds.
- II. Some birds are white.

Which of the above conclusions follow?

- A) Both I and II follow
- B) Only Conclusion I follows
- C) Only Conclusion II follows
- D) Neither I nor II follows



13. Statement: “Cities with better public transport systems have lower rates of private car ownership.”

Conclusions:

- I. Investing in public transport may reduce dependence on private cars.
- II. All cities should immediately ban private cars.

- A) Only Conclusion II follows
- B) Only Conclusion I follows
- C) Both conclusions follow
- D) Neither conclusion follows

14. Statement: “Use our cream regularly for glowing skin in just two weeks!”

Assumptions:

- I. People desire glowing skin.
- II. Regular use of the cream produces the desired result within two weeks.

Which assumptions are implicit in the statement?

- A) Both Assumptions I and II are implicit
- B) Only Assumption I is implicit
- C) Only Assumption II is implicit
- D) Neither assumption is implicit

15. Statement: “Should social media platforms be regulated by the government?”

Arguments:

- I. *Yes* — Unregulated social media enables the rapid spread of misinformation and harms mental health.
- II. *No* — Government regulation of social media threatens free speech and access to information.

- A) Only Argument I is strong
- B) Only Argument II is strong



- C) Neither argument is strong
- D) Both arguments are strong

16. Problem: A school's infrastructure is in serious disrepair and poses safety risks to students.

Courses of Action:

- I. Evacuate students immediately and conduct a thorough structural safety inspection.
- II. Ignore the problem as repairs are considered too costly.

- A) Both courses of action should be followed
- B) Only Course of Action II should be followed
- C) Only Course of Action I should be followed
- D) Neither course of action should be followed

17. Seven people — R, S, T, U, V, W, X — are seated in a straight row facing North. R is at the leftmost end. S is at position 2. T is at position 3. U sits at the centre. V is at position 5. W is at position 6. X is at the rightmost end.

Who sits at the **5th position from the left**?

- A) U
- B) V
- C) W
- D) X



18. Six people — A, B, C, D, E, F — are seated around a circular table, all facing the centre. A is at position 1 (reference). B is directly opposite A. C is immediately to the right of A. D is immediately to the right of C. E is immediately to the right of B. F occupies the remaining position.

Who is **immediately to the right of F**?

- A) A
- B) B
- C) C
- D) E

19. Five students P, Q, R, S, T are ranked by marks scored. T has the highest marks. Q has more marks than P. P has more marks than R. R has more marks than S. T has more marks than Q.

Who has the **least marks**?

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

20. Barometer : Atmospheric pressure :: Seismograph : ?

- A) Temperature
- B) Wind speed
- C) Earthquake intensity
- D) Humidity

21. $36 : 6 :: 49 : ?$

- A) 6
- B) 7
- C) 8
- D) 9



22. Four of the following five belong to the same group. Which is the **odd one out**?

Potato Carrot Radish Tomato Beetroot

- A) Tomato
- B) Carrot
- C) Radish
- D) Beetroot

23. Four of the following five numbers belong to the same group. Which is the **odd one out**?

1 8 27 64 100

- A) 1
- B) 8
- C) 27
- D) 100

24. There has been a sudden and significant surge in online grocery orders in a city. Which of the following is **most likely the cause**?

- A) A new public park opened in the city.
- B) The local electricity tariff increased.
- C) Residents increasingly prefer home delivery due to busy lifestyles and growing comfort with technology.
- D) Schools in the city introduced a new curriculum.



25. Statement: “Countries with higher literacy rates tend to have higher GDP per capita, according to international economic data.”

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

- A) Education is the sole determinant of a country's GDP.
- B) Higher literacy rates appear to be associated with higher GDP per capita across countries.
- C) All poor countries have extremely low literacy rates.
- D) Literacy alone guarantees economic prosperity for any nation.

26. Event I: The local health authority launched a city-wide vaccination drive.

Event II: The number of reported cases of the targeted disease dropped significantly within six months.

What is the relationship between these two events?

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

27. What is the angle between the hour hand and the minute hand of a clock at **8:20**?

- A) 110°
- B) 120°
- C) 125°
- D) 130°



28. If ‘&’ stands for ‘ $\times$ ’, ‘%’ stands for ‘+’, ‘^’ stands for ‘-’, and ‘~’ stands for ‘ $\div$ ’, find the value of:

$$45 \sim 9 \% 3 \& 7^{\wedge} 10$$

- A) 12
- B) 14
- C) 16
- D) 18

29. What is the cost of 5 kg of apples?

Statement 1: 1 kg of apples costs Rs. 80.

Statement 2: Vivaan bought 5 kg of apples.

- A) Only Statement 2 is sufficient to answer the question
- B) Only Statement 1 is sufficient to answer the question
- C) Both statements together are needed
- D) Neither statement is sufficient

30. In a Venn diagram with three overlapping circles A, B, and C, the region where **all three circles intersect** represents:

- A) Elements common to all three sets A, B, and C
- B) Elements belonging only to set A
- C) All elements in set A or set B or set C
- D) Elements belonging only to set B



Solutions

Q1. Series: 10, 13, 18, 25, 34, ?

Solution

Compute the differences between consecutive terms:

$$13 - 10 = 3, \quad 18 - 13 = 5, \quad 25 - 18 = 7, \quad 34 - 25 = 9$$

The differences are consecutive odd numbers: 3, 5, 7, 9, ... The next difference is 11.

Missing term = $34 + 11 = 45$.

Answer: (B)

Q2. Letter series: B, D, H, N, V, ?

Solution

Express each letter as its positional value and find the gaps:

$$B(2) \xrightarrow{+2} D(4) \xrightarrow{+4} H(8) \xrightarrow{+6} N(14) \xrightarrow{+8} V(22) \xrightarrow{+10} ?(32)$$

The gaps double: +2, +4, +6, +8, +10. The next position is $22 + 10 = 32$.

Since $32 > 26$, subtract 26: $32 - 26 = 6$, which corresponds to **F**.

Answer: (A)

Q3. Series: 2, 2, 4, 12, 48, ?

Solution

Each term is obtained by multiplying the previous term by a sequentially increasing integer:

$$2 \xrightarrow{\times 1} 2 \xrightarrow{\times 2} 4 \xrightarrow{\times 3} 12 \xrightarrow{\times 4} 48 \xrightarrow{\times 5} \mathbf{240}$$

The missing term is **240**.

Answer: (D)

Q4. DANCE → ADCNE; MONEY → ?



Solution

The coding rule swaps adjacent letter-pairs; a lone final letter remains unchanged.

Verification with DANCE (= D, A, N, C, E):

- Pair 1: (D, A) $\rightarrow$ (A, D)
- Pair 2: (N, C) $\rightarrow$ (C, N)
- Letter 5: E stays

Result: A, D, C, N, E = ADCNE. ✓

Applying to MONEY (= M, O, N, E, Y):

- Pair 1: (M, O) $\rightarrow$ (O, M)
- Pair 2: (N, E) $\rightarrow$ (E, N)
- Letter 5: Y stays

Result: O, M, E, N, Y = **OMENY**.

Answer: (C)

Q5. CHAIR = 39; CHARM =? (positional-value sum)

Solution

Verification: C= 3, H= 8, A= 1, I= 9, R= 18 $\Rightarrow 3 + 8 + 1 + 9 + 18 = 39$. ✓

For CHARM: C= 3, H= 8, A= 1, R= 18, M= 13

$$3 + 8 + 1 + 18 + 13 = 43$$

Answer: (B)

Q6. “He is the son of the only son of my grandmother.” — Sapna to Rohan

Solution

The *only son of Sapna's grandmother* = Sapna's father.

The *son of Sapna's father* = Sapna's brother.

Therefore Rohan is Sapna's brother $\Rightarrow$ Sapna is Rohan's **sister**.

Answer: (A)

Q7. A is B's mother; C is B's only sibling; D is C's grandfather. A's relation to



D?

Solution

Since C is B's only sibling and A is B's mother, A is also C's mother.

D is C's grandfather, meaning D is the father of C's parent. Since A is C's mother, D must be the father of A's husband (i.e. B and C's father).

Hence D is A's **father-in-law** $\Rightarrow$ A is D's **daughter-in-law**.

Answer: (D)

Q8. Tarun: 10 m South, right (West) 10 m, right (North) 10 m, right (East) 5 m. Distance from start?

Solution

Facing South, a right turn faces West; another right turn faces North; another right turn faces East.

Displacements:

- 10 m South
- 10 m West
- 10 m North
- 5 m East

North–South: $10\text{ S} - 10\text{ N} = 0$ (cancel).

East–West: $10\text{ W} - 5\text{ E} = 5\text{ m West}$.

Distance from start = $\sqrt{0^2 + 5^2} = 5\text{ m}$.

Answer: (C)

Q9. Uma faces West; turns right; walks 4 m; turns right; walks 3 m. Current direction?

Solution

Start: West.

First right turn (from West): West $\rightarrow$ **North**. Walks 4 m North.

Second right turn (from North): North $\rightarrow$ **East**. Walks 3 m East.

Uma is now moving **East**.



Answer: (B)

Q10. All mangoes are sweet; All sweet things are delicious. Conclusions I and II?

Solution

Applying the chain rule:

$$\text{Mangoes} \subseteq \text{Sweet} \subseteq \text{Delicious} \Rightarrow \text{Mangoes} \subseteq \text{Delicious}$$

Conclusion I (All mangoes are delicious) **follows.** ✓

Conclusion II (All delicious things are mangoes) is the invalid converse — many delicious things are not mangoes. ✗

Only **Conclusion I** follows.

Answer: (A)

Q11. Some apples are red; Some red things are beautiful. Conclusions I and II?

Solution

Conclusion I: “Some apples are beautiful” — this would require a direct link between apples and beauty. The given premises only establish: some apples are red, and some (possibly different) red things are beautiful. The overlap between “apples” and “beautiful” is not established. ✗

Conclusion II: “All beautiful things are apples” — clearly invalid; beauty is far broader than apples. ✗

Neither conclusion follows.

Answer: (D)

Q12. All swans are white; Some white things are birds. Conclusions I and II?

Solution

Conclusion I: “Some swans are birds” — the white birds mentioned in Premise 2 may be non-swans. We cannot conclude any swan is a bird from these premises alone. ✗

Conclusion II: “Some birds are white” — this is obtained by converting “Some white things are birds” (particular affirmative), which is a valid conversion: if some



white things are birds, then some birds are white. ✓

Only **Conclusion II** follows.

Answer: (C)

Q13. Statement: Cities with better public transport have lower car ownership.
Conclusions I and II?

Solution

Conclusion I (investing in public transport may reduce car dependence) is a reasonable and measured inference from the observed correlation. ✓

Conclusion II (all cities should immediately ban private cars) is an extreme prescription that goes far beyond what the data supports. ✗

Only **Conclusion I** follows.

Answer: (B)

Q14. Statement: “Use our cream regularly for glowing skin in just two weeks!”
Assumptions I and II?

Solution

Assumption I (people desire glowing skin) is implicit: the advertisement is designed to appeal to exactly this desire. ✓

Assumption II (regular use produces the result in two weeks) is implicit: the specific claim in the advertisement would be meaningless without this assumption. ✓

Both Assumptions I and II are implicit.

Answer: (A)

Q15. Should social media be regulated by the government? Arguments I and II?

Solution

Argument I highlights genuine harms (misinformation, mental health) that regulation could address — a substantive policy concern. **Strong.** ✓

Argument II raises the fundamental principle of free speech, which is a recognised and important counter-concern to government regulation. **Strong.** ✓



Both arguments are strong.

Answer: (D)

Q16. School infrastructure poses safety risks. Courses of Action I and II?

Solution

Course I (evacuate students and conduct a safety inspection) is a prudent, responsible, and proportionate response to a safety emergency. ✓

Course II (ignore the problem because repairs are costly) is irresponsible and endangers students' safety. ✗

Only **Course of Action I** should be followed.

Answer: (C)

Q17. Seven people R, S, T, U, V, W, X in a row. Who is at the 5th position from the left?

Solution

From the given clues, the seating arrangement from left to right is:

1	2	3	4	5	6	7
R	S	T	U	V	W	X

The person at the **5th position from the left** is V.

Answer: (B)

Q18. Six people A, B, C, D, E, F in a circle. Who is immediately to the right of F?

Solution

Placing people clockwise from the clues:

Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6
A	C	D	B	E	F



Moving clockwise, the seat immediately to the right of F (position 6) is position 1 = A.

Answer: (A)

Q19. Five students P, Q, R, S, T ranked by marks. Who has the least marks?

Solution

From the clues: $T > Q > P > R > S$ (highest to lowest marks).

Rank	Student
1st (Highest)	T
2nd	Q
3rd	P
4th	R
5th (Least)	S

The student with the **least marks** is **S**.

Answer: (D)

Q20. Barometer : Atmospheric pressure :: Seismograph : ?

Solution

A **barometer** is an instrument that **measures atmospheric pressure**.

A **seismograph** is an instrument that **measures and records earthquake intensity** (ground motion caused by seismic waves).

The answer is **Earthquake intensity**.

Answer: (C)

Q21. $36 : 6 :: 49 : ?$

Solution

The relationship is: a number is paired with its **square root**.

$$\sqrt{36} = 6 \Rightarrow \sqrt{49} = 7$$



Answer: (B)

Q22. Potato, Carrot, Radish, Tomato, Beetroot — odd one out?

Solution

Potato, Carrot, Radish, and Beetroot are all **root vegetables** — they are the underground parts of plants.

Tomato grows **above ground** and is botanically a **fruit** (the ripened ovary of the flowering plant).

The odd one out is **Tomato**.

Answer: (A)

Q23. 1, 8, 27, 64, 100 — odd one out?

Solution

$$1 = 1^3, \quad 8 = 2^3, \quad 27 = 3^3, \quad 64 = 4^3$$

These are all **perfect cubes**. However, 100 is **not** a perfect cube ($5^3 = 125 \neq 100$).

The odd one out is **100**.

Answer: (D)

Q24. Sudden surge in online grocery orders. Most likely cause?

Solution

Option A (a new public park) — has no logical connection to online grocery shopping. ✕

Option B (electricity tariff increase) — not directly related to online grocery demand. ✕

Option C (busy lifestyles and growing comfort with technology) — directly and logically explains a shift toward the convenience of online grocery delivery. ✓

Option D (new school curriculum) — unrelated to grocery ordering behaviour. ✕

The most likely cause is **Option C**.

Answer: (C)



Q25. Countries with higher literacy rates tend to have higher GDP per capita. Strongest conclusion?

Solution

The statement describes a statistical *association* (“tend to”), not a guaranteed causal relationship.

Option A (education is the *sole* determinant) — overstates causation; GDP has many determinants. ✕

Option B (higher literacy appears associated with higher GDP) — a careful, evidence-consistent inference that matches the data exactly. ✓

Option C (all poor countries have extremely low literacy) — an absolute and unwarranted generalisation. ✕

Option D (literacy *alone guarantees* prosperity) — overstates the finding. ✕

The strongest conclusion is **Option B**.

Answer: (B)

Q26. Event I: city-wide vaccination drive. Event II: cases of disease dropped. Relationship?

Solution

The vaccination drive (Event I) directly increased immunity in the population against the targeted disease. As a result, the number of new infections fell significantly within six months (Event II).

Event I is the cause; Event II is the effect.

Answer: (A)

Q27. Angle between hour hand and minute hand at 8:20?

Solution

Hour hand position (degrees from 12 o'clock, clockwise):

$$8 \times 30^\circ + 20 \times 0.5^\circ = 240^\circ + 10^\circ = 250^\circ$$

Minute hand position:

$$20 \times 6^\circ = 120^\circ$$



Angle between the hands:

$$|250^\circ - 120^\circ| = 130^\circ$$

Answer: (D)

Q28. $45 \sim 9 \% 3 \& 7^{\wedge} 10$ (with symbol substitution)

Solution

Substituting the symbols: $\sim \rightarrow \div$, $\% \rightarrow +$, $\& \rightarrow \times$, $^{\wedge} \rightarrow -$:

$$45 \div 9 + 3 \times 7 - 10$$

Applying BODMAS:

$$= 5 + 21 - 10 = 16$$

Answer: (C)

Q29. Cost of 5 kg of apples? Statements 1 and 2.

Solution

Statement 1 alone (1 kg costs Rs. 80): The cost of 5 kg = $5 \times 80 = \text{Rs. } 400$. **Sufficient.** ✓

Statement 2 alone (Vivaan bought 5 kg): This tells us the quantity but gives no price information. **Insufficient.** ✗

Only Statement 1 is sufficient.

Answer: (B)

Q30. Three overlapping circles A, B, C in a Venn diagram. What does the central intersection region represent?

Solution

In a Venn diagram, the region where **all three circles overlap** contains elements that simultaneously satisfy the defining property of **each** circle.

Therefore, the central intersection region represents **elements common to all three sets A, B, and C.**



Answer: (A)



Answer Key

Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans
1	B	2	A	3	D	4	C	5	B
6	A	7	D	8	C	9	B	10	A
11	D	12	C	13	B	14	A	15	D
16	C	17	B	18	A	19	D	20	C
21	B	22	A	23	D	24	C	25	B
26	A	27	D	28	C	29	B	30	A

