

CLAT Community

daily AR

SECTIONAL TEST

41

DAYS TO GO FOR CLAT 2027



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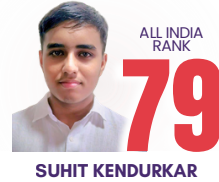


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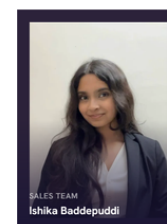
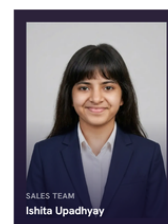
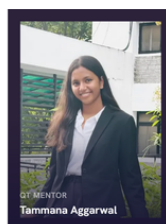
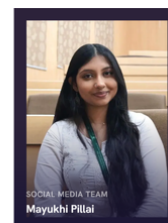
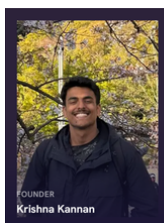
AND
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OUR COURSES



OUR MENTORS



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MENTORS' NOTE

Good morning everyone,

If you're reading this, you're already doing something that thousands of CLAT aspirants never do—you've shown up today. That might sound like a small thing, but over the next few months you'll realise that success in CLAT is rarely decided by one brilliant mock or one 12-hour study session. It's decided by the hundreds of ordinary days where you choose to sit down and study even when you don't feel like it.

The entire CLAT Community team is rooting for you. Whenever you're stuck, ask doubts, discuss questions, and make use of the people around you. You don't have to prepare alone. We hope today's material helps you take one more step towards your dream.

Now stop reading this note and get to work. Your future self will thank you for the effort you put in today.

All the best.

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DAILY AR**Passage 1**

A coastal Lighthouse Board keeps a catalogue of signal lamps. Every lamp is described by three features: Colour (Red, Green, White), Pattern (Steady, Flash, Group-flash) and Range (Short, Medium, Long). The catalogue holds exactly one lamp for each of the 27 possible combinations. Three distinct lamps form a Matched trio if, on each of the three features taken separately, the three lamps are either all alike or all different. A trio is a set of three lamps: the order in which the lamps are named does not matter, and the same set is never counted twice. Lamps are compared by their descriptions alone. The reserve store holds the nine different lamps below, each recorded once; every question refers to this store unless it says otherwise.

Lamp	Colour	Pattern	Range
L1	Red	Group-flash	Short
L2	Red	Group-flash	Medium
L3	Green	Group-flash	Long
L4	White	Group-flash	Short
L5	Green	Flash	Long
L6	White	Steady	Medium
L7	Red	Flash	Short
L8	Green	Steady	Short
L9	White	Group-flash	Long

Q1. How many Matched trios can be formed from the nine stored lamps?

- (A) 2
- (B) 4
- (C) 12
- (D) 23

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Q2. Among L1, L2, L3 and L4, exactly one Matched trio can be formed. Which lamp is the one left out of it?

- (A) L1
- (B) L2
- (C) L3
- (D) L4

Q3. Which lamp from the catalogue, although not in the store, would form a Matched trio together with L2 and L6?

- (A) White, Flash, Medium
- (B) Green, Flash, Long
- (C) Green, Group-flash, Medium
- (D) Green, Flash, Medium

Q4. Exactly one lamp from the 18 catalogue lamps outside the store is to be bought and added. For how many different catalogue lamps would adding that one lamp create at least one new Matched trio?

- (A) 24
- (B) 18
- (C) 15
- (D) 12

Q5. A lamp that lies in the largest number of stored Matched trios is scrapped (if several lamps tie, any one of them is scrapped). After the scrapping, how many Matched trios remain among the eight lamps left?

- (A) 3
- (B) 2
- (C) 1
- (D) 0

Q6. A tenth lamp, Red, Steady, Long, is added to the store. How many new Matched trios does it create?

- (A) 9
- (B) 6

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(C) 3

(D) 1

Q7. In the full catalogue of 27 lamps, how many Matched trios have all three Colours different?

(A) 36

(B) 117

(C) 243

(D) 81

Q8. How many of the following statements about the nine stored lamps are correct?

(i) No two stored Matched trios have two lamps in common.

(ii) Every stored lamp belongs to at least one stored Matched trio.

(iii) L3 and L7 belong to exactly one common stored Matched trio.

(iv) L1 and L4 belong to a common stored Matched trio.

(A) 1

(B) 2

(C) 3

(D) 4

Passage 2

The municipal swimming pool's wall clock has lost the tip of its minute hand, so its two hands are now the same length and cannot be told apart. Both hands move smoothly and uniformly; at 12:00 they lie together on the 12 mark, and the hour hand turns once every 12 hours. A lifeguard records each sighting as the two positions of the hands, in whole degrees measured clockwise from the 12 mark (0° to 359°). The order in which two positions are written carries no meaning. A sighting is possible if some assignment of the two hand roles to the two positions occurs at some time of day on a correctly running clock. Times of day are counted within one 12-hour cycle beginning at 12:00. The first six entries of the log are:

Entry	Positions
S1	$60^\circ, 0^\circ$
S2	$0^\circ, 150^\circ$

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S3	$90^\circ, 30^\circ$
S4	$200^\circ, 240^\circ$
S5	$110^\circ, 40^\circ$
S6	$45^\circ, 180^\circ$

Q9. A seventh sighting, S7, shows the positions 100° and 120° . At what time was it made?

- (A) 4:00
- (B) 3:20
- (C) $4:16 \frac{2}{3}$
- (D) Cannot be determined, because either hand could be the hour hand

Q10. A hand is seen exactly on the 12 mark; the other hand is hidden behind a post. For how many different times of day is this sighting possible?

- (A) 11
- (B) 13
- (C) 1
- (D) 12

Q11. A sighting shows two different positions, and the larger position is exactly three times the smaller (both positions are whole numbers of degrees, each below 360°). For how many different times of day can such a sighting have been made?

- (A) 8
- (B) 4
- (C) 3
- (D) 2

Q12. The next sighting logged after S7 (positions 100° and 120°) is S8, with positions 35° and 60° , and it was made less than 12 hours after S7. How much time passed between S7 and S8?

- (A) 9 hours 50 minutes
- (B) 2 hours 10 minutes

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(C) 10 hours 10 minutes

(D) 14 hours 10 minutes

Q13. At how many instants of a 12-hour cycle (from 12:00 inclusive to the next 12:00 exclusive) are both hands on whole-degree positions and visibly two separate hands, not lying on top of each other?

(A) 359

(B) 360

(C) 720

(D) 349

Q14. A single hand is seen exactly at 270° ; the other hand is hidden. For how many different times of day is this possible with the hidden hand lying strictly between the 12 mark (0°) and the 4 mark (120°)?

(A) 13

(B) 5

(C) 3

(D) 4

Q15. How many of the entries S1 to S6 in the log are possible sightings?

(A) 0

(B) 3

(C) 4

(D) 6

Q16. How many of the following statements are correct?

(i) The sighting 100° and 120° can be explained by exactly one time of day.

(ii) If the two hands are seen on top of each other at a whole-degree position, the time must be 12:00.

(iii) Whenever one hand is seen at a position that is a whole multiple of 30° and the other is hidden, there are exactly 13 possible times of day.

(iv) Some sighting of two different whole-degree positions can be explained by two different times of day.

(A) 1

(B) 2

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(C) 3

(D) 4

Passage 3

A heritage railway keeps an accurate station clock whose hour and minute hands move smoothly. A porter photographs the clock at whole-minute instants and marks each photograph with three digits. Positions are measured clockwise from the 12 mark, and the dial is split into three thirds: 1 stands for 0° up to but not including 120° , 2 for 120° up to but not including 240° , and 3 for 240° up to but not including 360° . The first digit (F) gives the third in which the hour hand lies, the second (G) the third in which the minute hand lies, and the third (K) the third in which the clockwise gap from the hour hand to the minute hand lies; a gap is always taken between 0° and 360° , and at 12:00 the gap is 0° . For example, 4:30 is marked 2-2-1. Three photographs form a Matched trio if, on each of the three digits taken separately, the marks are either all alike or all different. All times lie within one 12-hour cycle beginning at 12:00.

Q17. Photographs taken at 2:10 and 7:40 are two members of a Matched trio. Which of the following photographs, taken together with them, forms a Matched trio?

(A) 10:25

(B) 9:30

(C) 10:15

(D) 12:30

Q18. How many of the 60 photographs from 3:00 to 3:59 (both included) have $K = 1$?

(A) 20

(B) 21

(C) 22

(D) 24

Q19. The twelve whole-hour photographs, 12:00, 1:00, ..., 11:00, are laid out. How many Matched trios can be formed from them?

(A) 4

(B) 28

(C) 31

(D) 64

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Q20. In one 12-hour cycle, how many of the 720 whole-minute photographs are marked 1-1-1?

- (A) 80
- (B) 50
- (C) 44
- (D) 46

Q21. What is the first photograph after 12:00 that is marked with $G = 1$ and $K = 2$?

- (A) 5:00
- (B) 4:00
- (C) 12:22
- (D) 6:00

Q22. Photographs taken at 2:20 and 10:20 are two members of a Matched trio, and the third member was taken at 6:m for some whole number of minutes m . For how many values of m is this possible?

- (A) 20
- (B) 22
- (C) 12
- (D) 13

Q23. How many Matched trios are formed by three of the 720 photographs taken at the same minute past three hours that are exactly four hours apart, such as 12:15, 4:15 and 8:15?

- (A) 60
- (B) 720
- (C) 480
- (D) 240

Q24. How many of the following statements are correct?

- (i) 12:00 is marked 1-1-1 and 6:00 is marked 2-1-2.
 - (ii) No photograph in the cycle is marked 1-2-3.
 - (iii) The mark 3-3-3 occurs on strictly more photographs than any other mark.
 - (iv) Exactly 18 of the 27 possible marks occur during the cycle.
- (A) 1

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(B) 2

(C) 3

(D) 4



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ANSWER KEY**Q1. Answer: (B) 4**

Solution: Any two lamps fix exactly one third lamp in the catalogue: on each feature, equal values stay equal and different values take the missing third value. So go through the 36 pairs and ask whether the completing lamp is in the store. It is for exactly 12 pairs. Each trio is found three times, once from each of its three pairs, so there are $12 \div 3 = 4$ trios: {L1, L5, L6}, {L2, L3, L4}, {L3, L6, L7} and {L4, L7, L8}.

- (A) 2: counted only trios in which every feature is all different.
(C) 12: counted pairs, i.e. every trio three times.
(D) 23: counted trios matching on at least two of the three features.

Q2. Answer: (A) L1

Solution: {L2, L3, L4}: Colours Red, Green, White are all different; Patterns are all Group-flash; Ranges Medium, Long, Short are all different. So this is a Matched trio and the lamp left out is L1. The other three triples all fail.

- (B) L2: skipped the Range check ({L1, L3, L4} fails on Range only).
(C) L3: checked Pattern only ({L1, L2, L4} fails Colour and Range).
(D) L4: skipped the Colour check ({L1, L2, L3} fails on Colour only).

Q3. Answer: (D) Green, Flash, Medium

Solution: L2 is Red, Group-flash, Medium and L6 is White, Steady, Medium. Colour differs, so Green; Pattern differs, so Flash; Range is alike, so Medium.

- (A) copied the Colour of L6 although the lamps differ.
(B) changed the Range although both lamps are Medium.
(C) copied the Pattern of L2 although the lamps differ.

Q4. Answer: (C) 15

Solution: Of the 36 pairs, 12 are completed by lamps already stored, so the other 24 pairs are completed by lamps outside the store. These do not give 24 different lamps: Red Steady Long completes 3 pairs, and seven other lamps complete 2 each. The different completing lamps number 15; Red Flash Long, Green Flash Short and White Steady Long complete no pair.

- (A) 24: counted pairs without merging pairs that share a completing lamp.
(B) 18: assumed every outside lamp creates a trio.
(D) 12: counted pairs completed by stored lamps.

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Q5. Answer: (B) 2

Solution: The trios are {L1, L5, L6}, {L2, L3, L4}, {L3, L6, L7}, {L4, L7, L8}. L3, L4, L6 and L7 lie in two trios each; scrapping any of them destroys two trios, leaving two.

(A) 3: scrapped a lamp lying in only one trio.

(C) 1: assumed the lamp lies in three trios.

(D) 0: assumed it lies in all four trios.

Q6. Answer: (C) 3

Solution: Pairs completing to Red, Steady, Long: L2 with L7, L5 with L9, L6 with L8. No other pair works. So 3 new trios.

(A) 9: assumed every stored lamp takes part.

(B) 6: counted the six lamps rather than the three trios.

(D) 1: stopped after the first pair.

Q7. Answer: (D) 81

Solution: Choose the Red lamp in 9 ways and the Green lamp in 9 ways; the third lamp is forced and is automatically White. Each trio has one lamp of each Colour, so no double counting: $9 \times 9 = 81$.

(A) 36: counted single-Colour trios.

(B) 117: counted every Matched trio.

(C) 243: multiplied by 3 for an ordering that does not exist.

Q8. Answer: (B) 2

Solution: (i) true: two lamps fix exactly one completing lamp. (ii) false: L9 is in no trio. (iii) true: L6 is the only completing lamp of L3 and L7. (iv) false: L1 and L4 are completed by Green, Group-flash, Short, which is not stored. Two statements are correct.

(A) 1: rejected (iii).

(C) 3: accepted (iv) ignoring Range.

(D) 4: also accepted (ii).

Q9. Answer: (B) 3:20

Solution: With the hour hand at H degrees, the time is 2H minutes after 12:00 and the minute hand is at $12H \bmod 360$. Hour hand at 100° gives the minute hand at $1200 - 1080 = 120^\circ$, matching. That is 200 minutes, 3:20. Hour hand at 120° would need the minute hand at 0° , not 100° . Only 3:20.

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- (A) 4:00: took 120° as hour hand without checking the minute hand.
(C) 4:16 $\frac{2}{3}$: read hour and minutes from different hands without consistency.
(D) assumed both assignments are possible.

Q10. Answer: (D) 12

Solution: As the minute hand it is on the 12 mark at h:00 for 12 times. As the hour hand at 0° the time is 12:00, already counted. So 12.

- (A) 11: excluded 12:00.
(B) 13: counted 12:00 twice.
(C) 1: counted only the hour-hand reading.

Q11. Answer: (C) 3

Solution: Positions x and $3x$, x at most 119. Smaller is the hour hand: $12x \equiv 3x$, so $9x$ is a multiple of 360, $x = 40$ or 80 (1:20 and 2:40). Larger is the hour hand: $36x \equiv x$, so $35x$ is a multiple of 360, $x = 72$, giving 7:12. Three times.

- (A) 8: allowed $3x$ to wrap past 360° .
(B) 4: counted 120° and 0° .
(D) 2: forgot the reversed roles.

Q12. Answer: (A) 9 hours 50 minutes

Solution: S7 is 3:20. S8: hour hand 35° needs the minute hand at 60° , so 70 minutes, 1:10. It came later and within 12 hours, so it is 13:10. From 3:20 to 13:10 is 9 hours 50 minutes.

- (B) 2 h 10 min: plain difference.
(C) 10 h 10 min: minutes subtracted without borrowing.
(D) 14 h 10 min: added 12 hours to the plain difference.

Q13. Answer: (A) 359

Solution: The hour hand is on a whole degree only at an even number of minutes: 360 instants. The minute hand is then automatically on a whole degree. The hands coincide at $\frac{720k}{11}$ minutes, an even whole number only for $k = 0$. Remove 12:00: 359.

- (B) 360: forgot 12:00 overlap.
(C) 720: counted every minute.
(D) 349: removed all 11 coincidences.

Q14. Answer: (D) 4

Solution: Hour hand at 270° gives 9:00 with the minute hand at 0° , not strictly inside. Minute

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hand at 270° gives h:45, with the hour hand at $30h + 22.5$ degrees: 22.5, 52.5, 82.5, 112.5 are below 120. Four times.

(A) 13: all possible times.

(B) 5: included 9:00.

(C) 3: treated the stretch as 90° wide.

Q15. Answer: (C) 4

Solution: One position H must be the hour hand and the other must equal $12H \bmod 360$. S1 possible (2:00), S2 possible (5:00), S3 impossible, S4 possible (6:40), S5 impossible, S6 possible (1:30). Four.

(A) 0: no reduction mod 360.

(B) 3: tested only the first-written position as hour hand.

(D) 6: ignored the hour hand's drift.

Q16. Answer: (B) 2

Solution: (i) true. (ii) true: the hour hand would be at $360k/11$ degrees, whole only for $k = 0$. (iii) false: at 0° there are 12 times, not 13. (iv) false: two readings need $143a$ to be a multiple of 360, forcing $a = 0$. Two statements are correct.

(A) 1: rejected (ii).

(C) 3: accepted (iii).

(D) 4: accepted (iv).

Q17. Answer: (A) 10:25

Solution: 2:10 is marked 1-1-3; 7:40 is marked 2-3-1. The third photograph must be marked 3-2-2. At 10:25 the hour hand is at 312.5° ($F = 3$), the minute hand at 150° ($G = 2$) and the gap is 197.5° ($K = 2$). The others each fail one digit.

(B) 9:30 is 3-2-3 (K fails).

(C) 10:15 is 3-1-2 (G fails).

(D) 12:30 is 1-2-2 (F fails).

Q18. Answer: (C) 22

Solution: At 3:m the gap is $5.5m - 90$ (plus 360 if negative). $K = 1$ needs $0 \leq 5.5m - 90 < 120$, so $m = 17$ to 38: 22. Check: 17 for $K = 3$, 21 for $K = 2$, total 60.

(A) 20: hour hand held still.

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(B) 21: counted the middle third.

(D) 24: hour hand at 1° a minute.

Q19. Answer: (C) 31

Solution: At whole hours $G = 1$ throughout. $F = 1$ for hours 12 to 3, $F = 2$ for 4 to 7, $F = 3$ for 8 to 11. K values by group: 1, 3, 3, 3; 3, 2, 2, 2; 2, 1, 1, 1. Inside one F -group: 3 trios ($\{1,2,3\}$, $\{5,6,7\}$, $\{9,10,11\}$). Across all three F -groups, K must be all different: (1,3,2) gives 1 trio and (3,2,1) gives 27. Total $3 + 28 = 31$.

(A) 4: only trios four hours apart.

(B) 28: only different- F trios.

(D) 64: did not test K .

Q20. Answer: (D) 46

Solution: $F = 1$ for hours 12, 1, 2, 3; $G = 1$ for $m = 0$ to 19; $K = 1$ needs $0 \leq 5.5m - 30h < 120$. Hour 12: 20; hour 1: $m = 6$ to 19, 14; hour 2: $m = 11$ to 19, 9; hour 3: $m = 17$ to 19, 3. Total 46.

(A) 80: ignored K .

(B) 50: hour hand held still.

(C) 44: gap grew at 5° a minute.

Q21. Answer: (A) 5:00

Solution: $G = 1$ means minutes 0 to 19. At 12 o'clock $K = 1$; in hours 1 to 3 K is 1 or 3. At 4:00 the gap is exactly 240° , so $K = 3$, and K stays 3 until 4:19. At 5:00 the gap is 210° , $K = 2$, with $G = 1$. So 5:00.

(B) 4:00: put 240° in the middle third.

(C) 12:22: ignored G .

(D) 6:00: looked for the first straight line.

Q22. Answer: (D) 13

Solution: 2:20 is 1-2-1 and 10:20 is 3-2-2. The 6:m photograph has $F = 2$, so F is all different. G must be 2 ($m = 20$ to 39). K must be 3, which needs $5.5m + 180$ from 240 to below 360, so $m = 11$ to 32. Both: $m = 20$ to 32, 13 values.

(A) 20: ignored K .

(B) 22: ignored G .

(C) 12: dropped $m = 20$.

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Q23. Answer: (D) 240

Solution: Photographs at $h:m$, $(h+4):m$, $(h+8):m$: the hour hand is in three different thirds (F all different), the minute hand is fixed (G alike), and the gap drops 120° each time (K all different). Every such triple is a Matched trio. $60 \text{ minute values} \times 4 \text{ hour groups} = 240$.

(A) 60: one per minute only.

(B) 720: every photograph as a start.

(C) 480: each trio counted twice.

Q24. Answer: (C) 3

Solution: (i) true: 12:00 is 1-1-1 and 6:00 is 2-1-2. (ii) true: with $F = 1$ and $G = 2$ the gap is positive and below 240° , so $K = 3$ is impossible. (iii) false: 1-3-2, 2-3-1 and 3-3-3 each occur 49 times, a tie. (iv) true: exactly 18 marks occur. Three statements are correct.

(A) 1: accepted only (i).

(B) 2: rejected (iv).

(D) 4: accepted (iii).

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