CLAT Community

daily QT

SECTIONAL TEST

129 DAYS TO GO FOR **CLAT 2027**

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OUR RANKERS

1 in every 4 of CLAT Community's students are now placed in Top 5 NLUs.

ALL INDIA RANK **15**

SAHER GOLE

ALL INDIA RANK **17**

PARTHIVA SUSHANTH

ALL INDIA RANK **61**

MIHIKA AGGARWAL

ALL INDIA RANK **79**

SUHIT KENDURKAR

ALL INDIA RANK **86**

RIYA CHAUHAN

ALL INDIA RANK **100**

SHEIKH EHSAAN KHALEELULLAH

ALL INDIA RANK **104**

HRISHIT PODDAR

ALL INDIA RANK **137**

ROHAN YADAV

ALL INDIA RANK **146**

TEJAS ROY

ALL INDIA RANK **147**

ANIRUDDH BAJAJ

ALL INDIA RANK **189**

KABIR WADHWANI

ALL INDIA RANK **263**

CANCHI SISTLA AKSHARA

ALL INDIA RANK **319**

SHIVAM TRIPATHI

ALL INDIA RANK **413**

HARDIK GAUTAM

ALL INDIA RANK **NLSIU**

MANYA BHASKAR

ALL INDIA RANK **NLSIU**

NAMASHRITA GOPINATH

ALL INDIA RANK **NLSIU**

RONIL DHASAL

ALL INDIA RANK **NALSAR**

VEDA RAO

ALL INDIA RANK **NLSIU**

SAMANDAR SINGH

ALL INDIA RANK **NALSAR**

GANJI HAINDAVI

ALL INDIA RANK **NALSAR**

SAHISHNA

ALL INDIA RANK **NLSIU**

PRANAV. S

AND MANY MORE.

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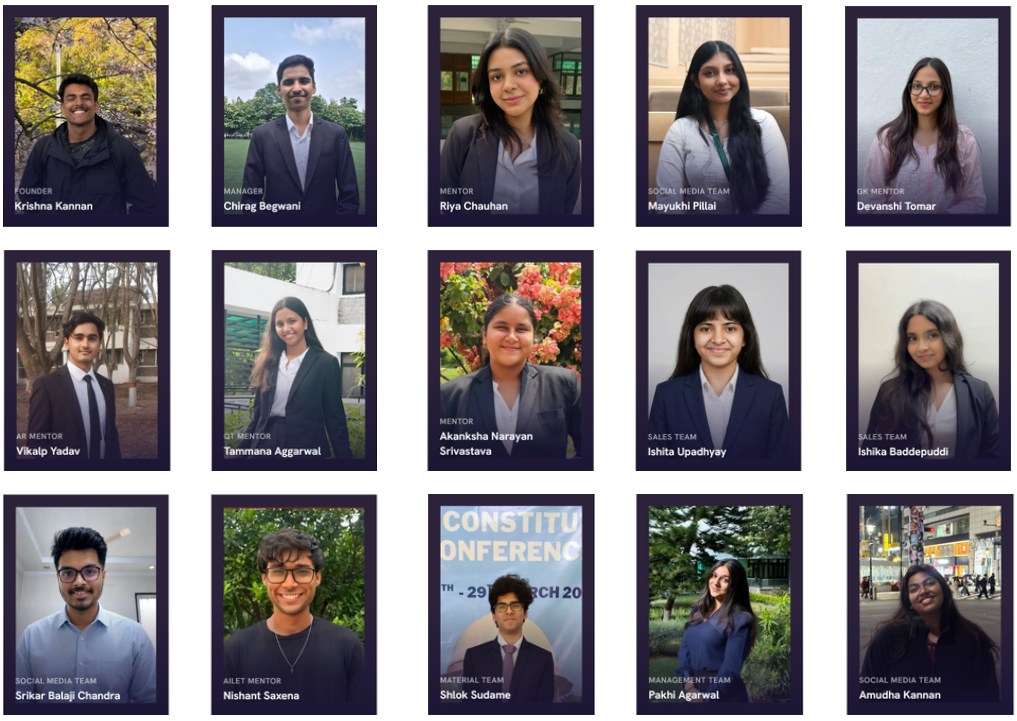
OUR COURSES

OUR MENTORS



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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Quantitative Aptitude

Passage I

Silverline Packaging Co. designs custom containers for its clients, ranging from rectangular shipping boxes to cylindrical tins and conical containers for specialty products. Before finalising a design, the engineering team calculates the surface area of each container to estimate the amount of packaging material required, and the volume to confirm it can hold the intended quantity of product. Because many orders involve wrapping a smaller container inside a larger outer box, or covering only certain faces of a container with a printed label, designers frequently need to compute areas of specific parts of a shape rather than the whole surface. The team also compares two container designs of different shapes to determine which uses material more efficiently for the same volume. Study the following details about this month's container designs, then answer the questions below.

1. A rectangular shipping box has dimensions 50 cm × 30 cm × 20 cm. Find its total surface area.

(A) 5,800 cm²

(B) 6,000 cm²

(C) 6,200 cm²

(D) 6,400 cm²

2. A cylindrical tin has a radius of 7 cm and a height of 10 cm. Find its curved surface area. (Use $\pi = 22/7$.)

(A) 420 cm²

(B) 440 cm²

(C) 460 cm²

(D) 480 cm²

3. A conical container has a base radius of 3 cm and a height of 7 cm. Find its volume. (Use $\pi = 22/7$.)

(A) 60 cm³

(B) 63 cm³

(C) 66 cm³

(D) 70 cm³

4. A cylindrical tin of radius 7 cm and height 10 cm is to be wrapped with a label covering only the curved surface, excluding a 1 cm strip at the top and bottom (so the label height is 8 cm). Find the area of the label. (Use π = 22/7.)

(A) 320 cm²

(B) 336 cm²

(C) 352 cm²

(D) 368 cm²

5. A cube-shaped box has a volume of 1,728 cm³. Find its total surface area.

(A) 800 cm²

(B) 832 cm²

(C) 864 cm²

(D) 900 cm²

6. A hollow cylindrical pipe has an outer radius of 9 cm, an inner radius of 2 cm, and a length of 20 cm. Find the volume of material used in the pipe. (Use π = 22/7.)

(A) 4,600 cm³

(B) 4,720 cm³

(C) 4,840 cm³

(D) 4,960 cm³

Passage II

Silverleaf Community Club hosts a weekly game night where members play a mix of card and dice games for small prizes. For the card games, a standard deck of 52 playing cards is used, and hosts often draw cards at random to decide starting players or bonus rounds. For the dice games, members roll one or two standard six-faced dice, and certain combinations of the numbers rolled determine bonus points or penalties. Because the club wants every game to feel fair, the organisers occasionally calculate the exact likelihood of a particular draw or roll before deciding on the rules for a new event, ensuring that no combination is either too rare or too common to be interesting. Study the following details about this week's card and dice games, then answer the questions below.

7. A card is drawn at random from a standard deck of 52 playing cards. Find the probability that it is a king.

(A) 1/26

(B) 1/13

(C) 1/12

(D) 3/26

8. A card is drawn at random from a standard deck of 52 cards. Find the probability that it is either a heart or a queen.

(A) 4/13

(B) 5/13

(C) 1/4

(D) 17/52

9. Two standard six-faced dice are rolled together. Find the probability that the sum of the numbers rolled is 8.

(A) 1/9

(B) 5/36

(C) 1/6

(D) 7/36

10. Two standard six-faced dice are rolled together. Find the probability that the product of the numbers rolled is greater than 15.

(A) 9/36

(B) 10/36

(C) 11/36

(D) 12/36

11. Two cards are drawn one after another, without replacement, from a standard deck of 52 cards. Find the probability that both cards drawn are aces.

(A) 1/221

(B) 1/169

(C) 1/52

(D) 1/26

12. Two standard six-faced dice are rolled together. Find the probability of getting at least one 6.

(A) 10/36

(B) 11/36

(C) 12/36

(D) 13/36

ANSWER KEY

Q1.

Total surface area of a cuboid = 2(lb + bh + hl).

= 2(50×30 + 30×20 + 20×50) = 2(1,500 + 600 + 1,000) = 2 × 3,100 = 6,200 cm².

Answer → (C) 6,200 cm²

Q2.

Curved surface area of a cylinder = 2πrh.

= 2 × (22/7) × 7 × 10 = 440 cm².

Answer → (B) 440 cm²

Q3.

Volume of a cone = (1/3)πr²h.

= (1/3) × (22/7) × 3² × 7 = (1/3) × 22 × 9 = 66 cm³.

Answer → (C) 66 cm³

Q4.

Label area = curved surface area for the label's height = 2πr × (label height).

= 2 × (22/7) × 7 × 8 = 352 cm².

Answer → (C) 352 cm²

Q5.

Edge of the cube = cube root of volume = $\sqrt[3]{1,728}$ = 12 cm.

Total surface area of a cube = 6 × (edge)² = 6 × 12² = 6 × 144 = 864 cm².

Answer → (C) 864 cm²

Q6.

Volume of material = π(R² − r²) × length, where R = 9 cm and r = 2 cm.

= (22/7) × (81 − 4) × 20 = (22/7) × 77 × 20 = 22 × 11 × 20 = 4,840 cm³.

Answer → (C) 4,840 cm³

Q7.

There are 4 kings in a standard deck of 52 cards.

Probability = 4/52 = 1/13.

Answer → (B) 1/13

Q8.

Number of hearts = 13. Number of queens = 4. The queen of hearts is counted in both, so it must be subtracted once.

Favourable outcomes = 13 + 4 − 1 = 16.

Probability = 16/52 = 4/13.

Answer → (A) 4/13

Q9.

Pairs of dice summing to 8: (2,6), (3,5), (4,4), (5,3), (6,2) — 5 outcomes.

Total possible outcomes = 6×6 = 36.

Probability = 5/36.

Answer → (B) 5/36

Q10.

Checking all pairs (a,b) with a,b from 1–6 where the product a×b exceeds 15:

a=3: (3,6)=18 — 1 outcome. a=4: (4,4)=16, (4,5)=20, (4,6)=24 — 3 outcomes.

a=5: (5,4)=20, (5,5)=25, (5,6)=30 — 3 outcomes. a=6: (6,3)=18, (6,4)=24, (6,5)=30, (6,6)=36 — 4 outcomes.

Total favourable outcomes = 1+3+3+4 = 11. Probability = 11/36.

Answer → (C) 11/36

Q11.

Probability the first card is an ace = 4/52.

Given the first was an ace, 51 cards remain with 3 aces left, so probability the second is also an ace = 3/51.

Probability both are aces = (4/52) × (3/51) = 12/2,652 = 1/221.

Answer → (A) 1/221

Q12.

It is easier to use the complement: probability of getting no 6 on either die = (5/6) × (5/6) = 25/36.

Probability of at least one 6 = 1 − 25/36 = 11/36.

Answer → (B) 11/36

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