

Doubt Clearing Session

Course on General Aptitude and Engineering Mathematics for GATE
2023-24

General Aptitude

PYQ'S on Logical Reasoning - IV

Question 1

A worker noticed that the hour hand on the factory clock had moved 225 degrees during her stay at the factory. For how long does she stay in the factory?

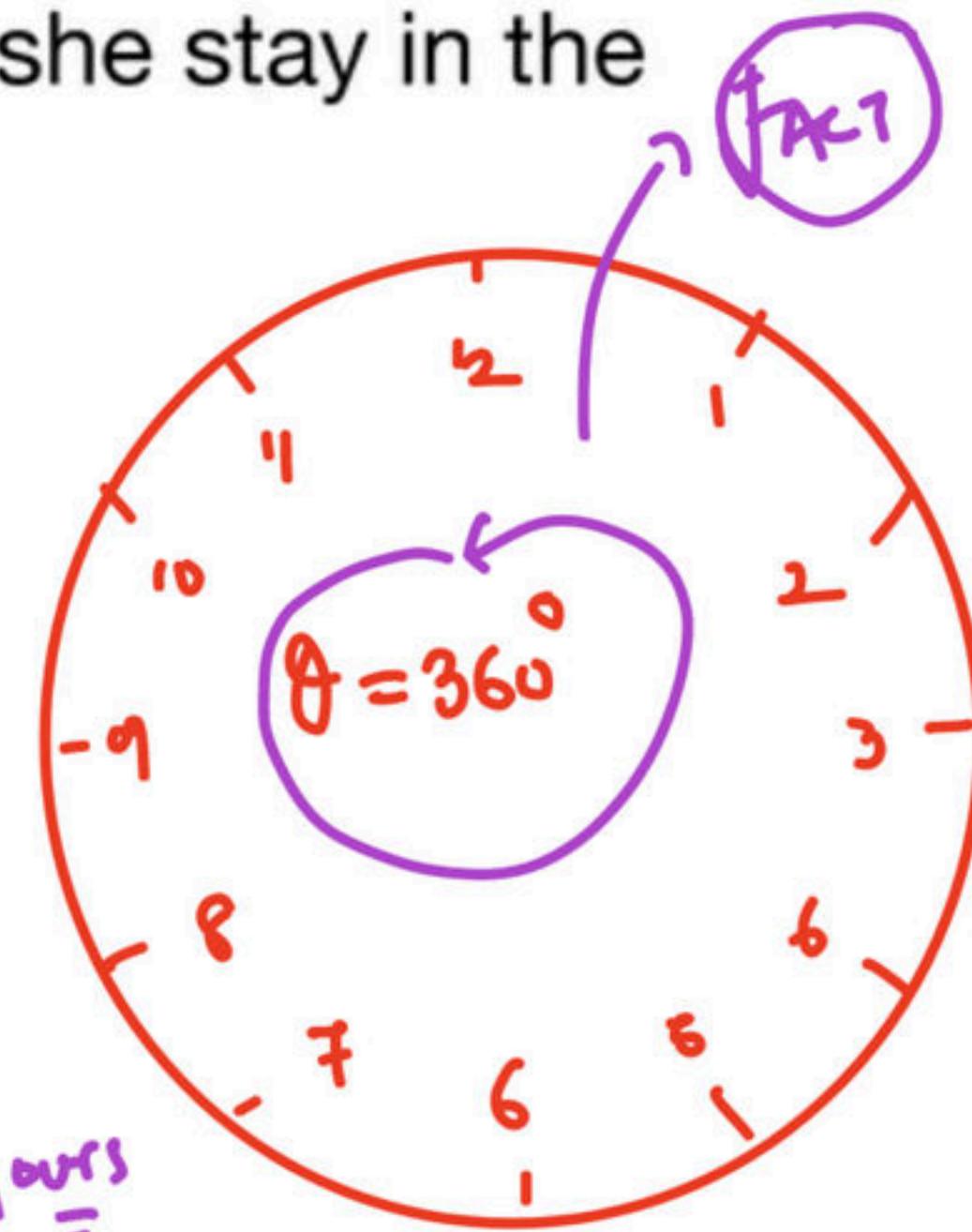
- A) 8.5 hours
- B) 7.5 hours
- C) 3.75 hours
- D) 4 hours and 15 minutes

$$360^\circ = 12 \text{ hours}$$

$$225^\circ = ?$$

$$\frac{225 \times 12}{360} = \frac{15}{2} = 7.5 \text{ hours}$$

Analog clock =



Answer

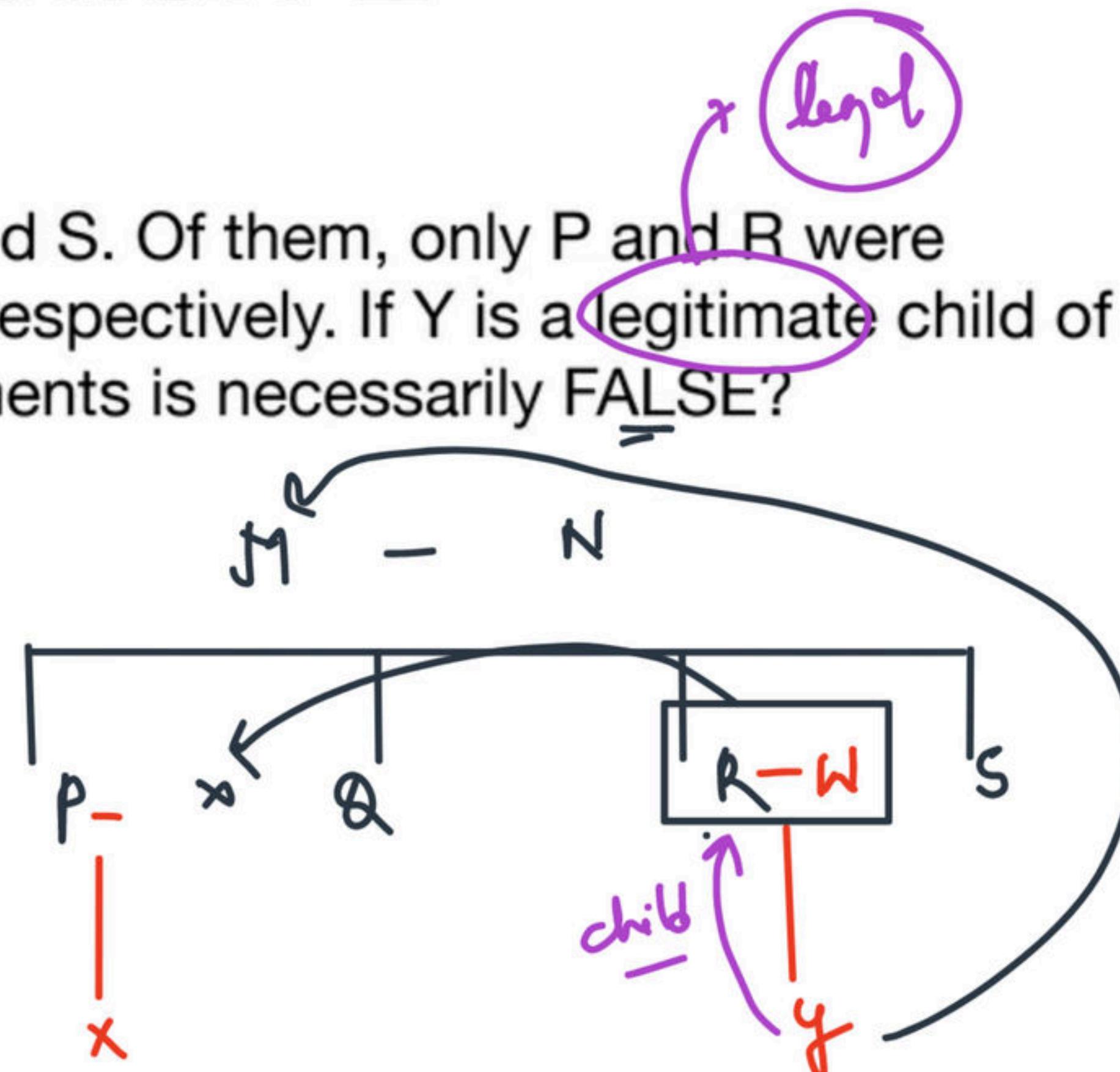
- Option B)

Question 2

M and N had four children P, Q, R and S. Of them, only P and R were married. They had children X and Y respectively. If Y is a legitimate child of W, which one of the following statements is necessarily FALSE?

- A) W is the wife of R
- B) R is the father of Y
- C) M is the grandmother of Y
- D) W is the wife of P

FALSE



Answer

- Option D)

Question 3

in translation

Congo was named by Europeans. Congo's dictator Mobuto later changed the name of the country and the river to Zaire with the objective of Africanising names of persons and spaces. However, the name Zaire was a Portuguese alternation of Nzadi o Nzere, a local African term meaning 'River that swallows Rivers'. Zaire was the Portuguese name for the Congo river in the 16th and 17th centuries. Which one of the following statements can be inferred from the paragraph above?

- A) The term Nzadi o Nzere was of Portuguese origin
- B) As a dictator Mobuto ordered the Portuguese to alter the name of the river to Zaire
- C) Mobuto's desire to Africanise names was prevented by the Portuguese
- D) Mobuto was not entirely successful in Africanising the name of his country

Answer

- Option D)

Question 4

→ hypothetical situation

- Under a certain legal system, prisoners are allowed to make one statement. If their statement turns out to be true, then they are hanged. If the statement turns out to be false then they are shot. One prisoner made a statement and the judge had no option but to set him free. Which one of the following could be that statement?

A) I committed the crime

True = hanged ✓

B) You committed the crime

False = shot ✓
Judge
True = hanged

False = shot ✓

Result

C) I will be shot

True = False

FREE

D) I did not commit the crime

True = Free

False = Shot

Answer

- Option C)

Default = North

Question 5

left ↑ right

- Five different books (P, Q, R, S, T) are to be arranged on a shelf. The books R and S are to be arranged first and second, respectively from the right side of the shelf. The number of different orders in which P, Q and T may be arranged is ____.

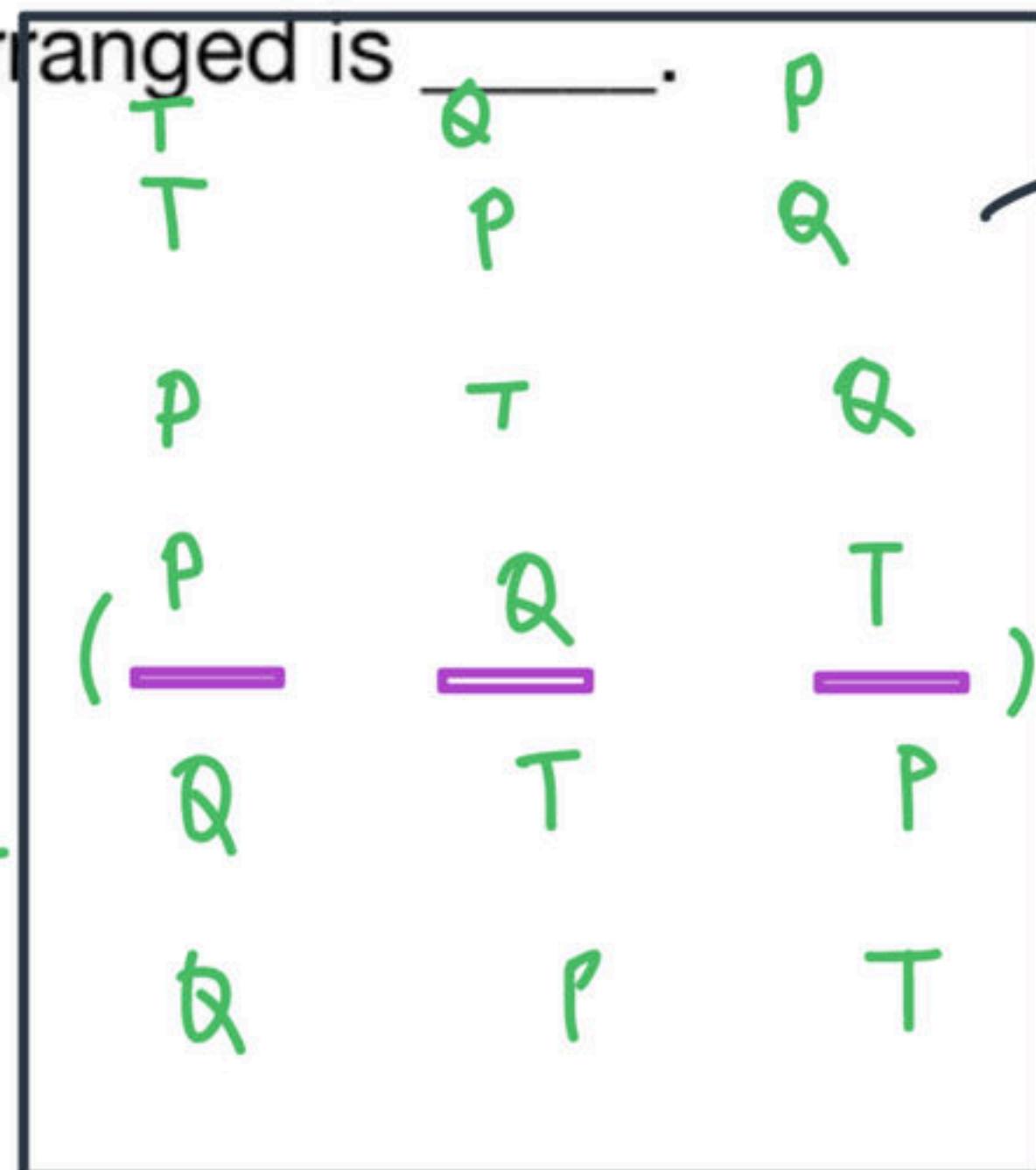
A) 12

B) 2

C) 120

D) 6

left



Three books → 3!

$$\Rightarrow 3 \times 2 \times 1 = 6.$$

Right

Answer

- Option D)

Question 6

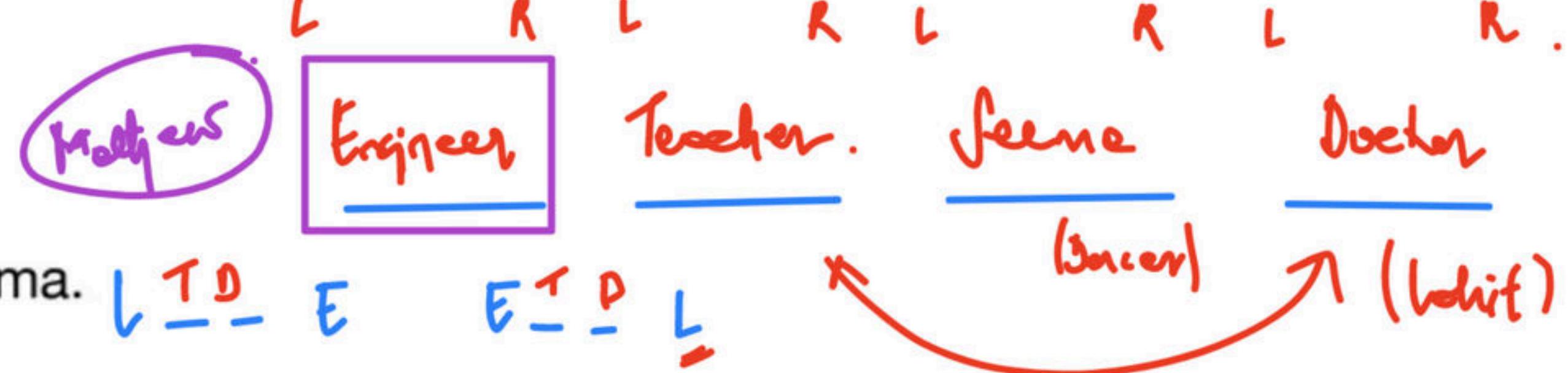
Default = North

Four people are standing in a line facing you.

They are Rahul, Mathew, Seema and Lohit. One is an engineer, one is a doctor, one a teacher and another a dancer.

You are told that:

MSy Smy



1. Mathew is not standing ~~next~~ to Seema.

2. There are two people standing between Lohit and the engineer.

3. Rahul is not a doctor.

R - Doctor X

4. The teacher and the dancer are standing next to each other.

T-D, D-T

5. Seema is turning to her right to speak to the doctor standing next to her.

Who among them is an engineer? A) Lohit B) Rahul C) Seema ~~D) Mathew~~

Answer

- Option D)

Question 7

impartial = unbiased

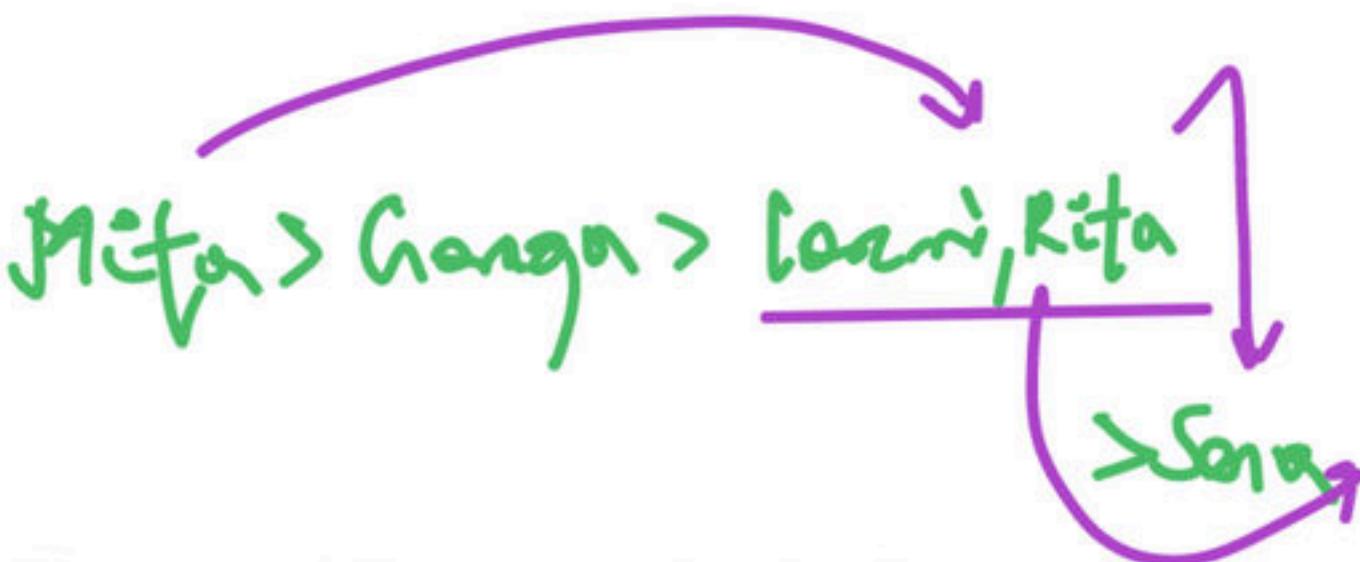
“Indian history was written by British historians—extremely well documented and researched, but not always impartial. History had to serve its purpose: Everything was made subservient to the glory of the Union Jack. Latter-day Indian scholars presented a contrary picture.” From the text above, we can infer that: Indian history written by British historians _____.

- A) was well documented and researched but was sometimes biased
- B) was well documented and not researched but was always biased X
- C) was not well documented and researched and was sometimes biased ✓
- D) was not well documented and researched and was always biased X

Answer

- Option A)

Question 8



There are five members Mita, Ganga, Rita, Laxmi and Sana. Ganga is taller than Laxmi and Rita both. Laxmi is taller than Sana. Mita is taller than Ganga. Which of the following statement is correct?

- 1. Laxmi is taller than Rita
- 2. Mita is taller than Rita
- 3. Rita is taller than Sana
- 4. Ganga is taller than Sana

Ganga > Laxmi, Rita
Laxmi > Sana
Mita > Ganga

A) 1

B) 3

C) 1 and 3

D) 2 and 4

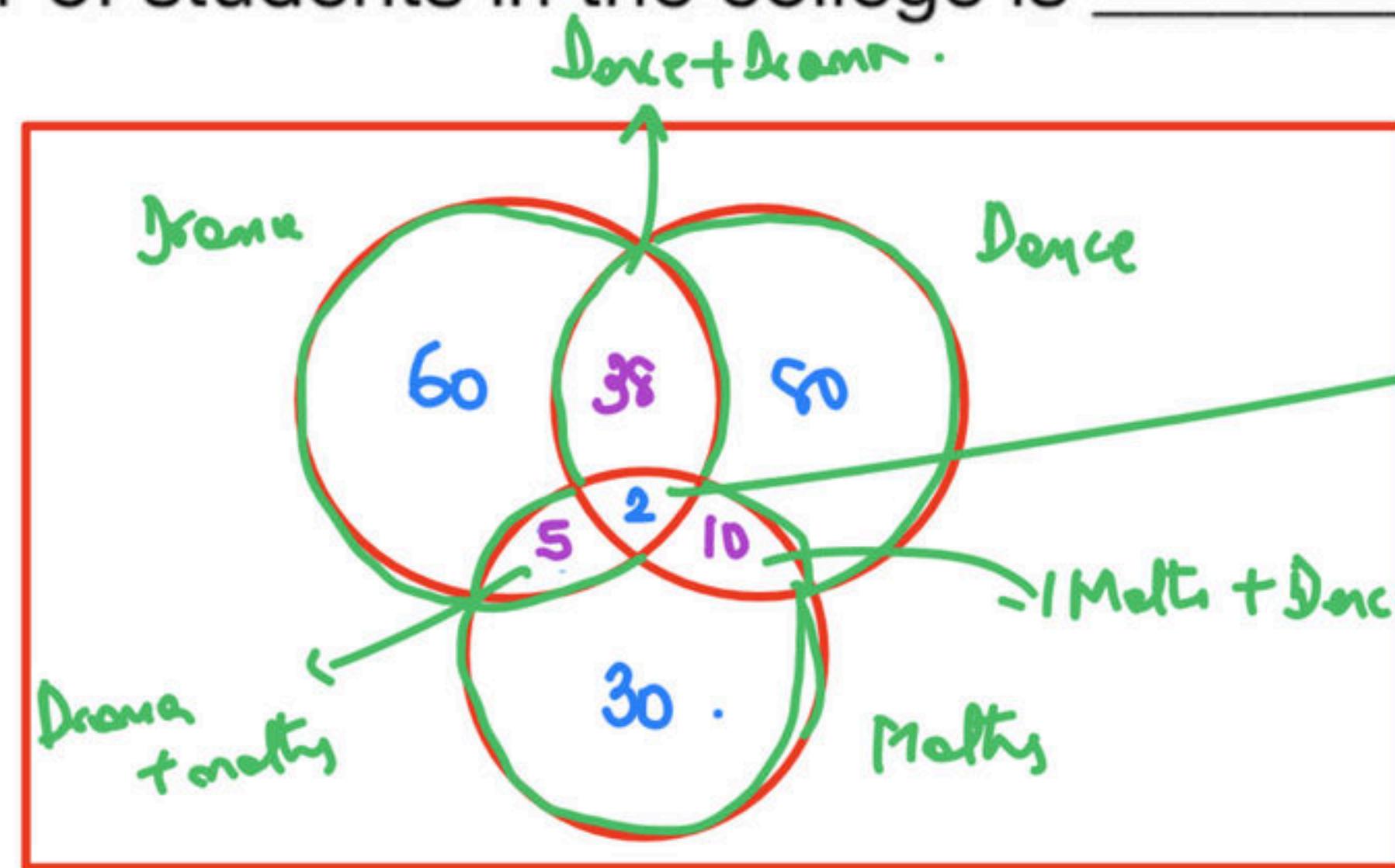
Answer

- Option D)

Question 9

In a college, there are three student clubs. Sixty students are only in the Drama club. 80 students are only in the Dance club, 30 students are only in the Maths club. 40-2 students are in both Drama and Dance clubs. 12 students are in both Dance and Maths clubs, 7 students are in both Drama and Maths clubs, and 2 students are in all the clubs. If 75% of the students in the college are not in any of these clubs, then the total number of students in the college is _____.

- A) 225
- B) 1000
- C) 975
- D) 900



$$D + D \cap M$$

$$\underline{60} + \underline{40} + \underline{80} + \underline{4} + \underline{2} + \underline{12} + \underline{30}$$

$$= 231 - 6. \text{ GT}$$

$$= 225. = \frac{1}{4}$$

$$IR = 225.$$

$$4I = 225 \times 4 = 1000$$

Answer

- Option D)

negative = false.

Negation = Assumption.
No.

Question 10

Px

+

S
R

did

R did it

The police arrested four criminals – P, Q, R and S. The criminals knew each other. They made the following statements: P says “Q committed the crime.” Q says “[S committed the crime]” R says “I did not do it.” S says “What Q said about me is false.” Assume only one of the arrested four committed the crime and only one of the statements made above is true. Who committed the crime?

A) R

B) P

C) S

D) Q

P → True

Q → False

R → False

S → False

Q, R, S

→ False

→ True

→ False

→ False

False, False, False, True

Qx Sx Rx

→ False
→ False
→ True
→ False

→ False
→ False
→ True
→ False

Qx, Sx, Rx, R

General Aptitude

PYQ'S on Analytical Reasoning

- I

Question 1

- Pick the odd one out from the following options:

A) CADBE → 
1 2 3 4 5

B) JHKIL → 

C) XVYWZ → 

D) ONPMQ → 
1 2 3 4 5

N M O P Q

Answer

- Option D)

which is present everywhere

Question 2

Rule 1: Statement = +ve
Conclusion = +ve.

Computers were invented for performing only high-end useful computations. However, it is no understatement that they have taken over our world today. The internet, for example, is **ubiquitous**. Many believe that the internet itself is an **unintended consequence** of the original invention. With the advent of mobile computing on our phones, a whole new dimension is now enabled. One is left wondering if all these developments **are good or, more importantly, required**. Which of the statement(s) below is/are logically valid and can be inferred from the above paragraph?

- ✗ (i) The author believes that computers are **not good for us**.
 - ✗ (ii) Mobile computers and the internet are both **intended inventions**.
- A) (i) only B) (ii) only C) Both (i) and (ii) D) neither (i) nor (ii)

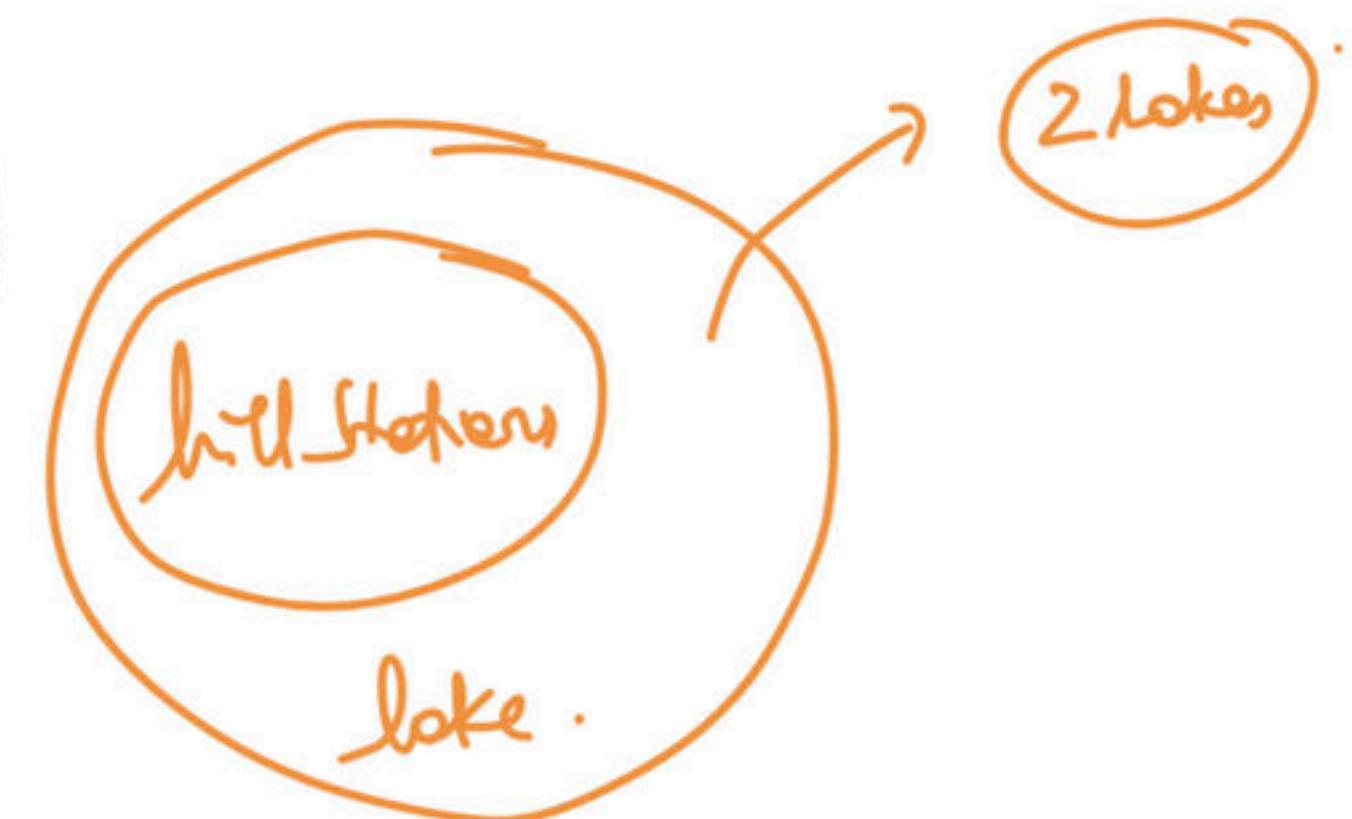
Answer

- Option D)

Jute: Statement = true

Candy = true.

Question 3



All hill-stations have a lake. Ooty has two lakes.

Which of the statement(s) below is/are logically valid and can be inferred from the above sentences?

- (i) Ooty is not a hill-station.
 - (ii) No hill-station can have more than one lake.
- A) (i) only B) (ii) only C) Both (i) and (ii) D) neither (i) nor (ii)

Answer

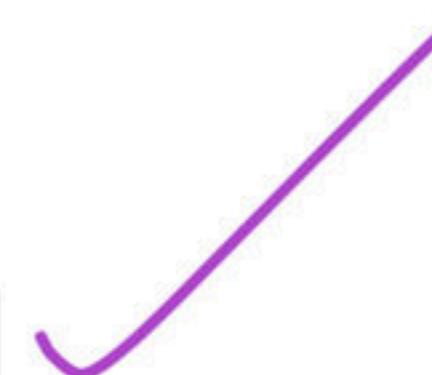
- Option D)

R2D2 is the only robot
which can repair aeroplanes.

Question 4

R2D2 is a robot. R2D2 can repair aeroplanes. No other robot can repair aeroplanes. Which of the following can be logically inferred from the above statements?

- A) R2D2 is a robot which can only repair aeroplanes.
- B) R2D2 is the only robot which can repair aeroplanes.
- C) R2D2 is a robot which can repair only aeroplanes.
- D) Only R2D2 is a robot.



Answer

- Option B)

Question 5

60% =
Successful

90% = higher
"Successful"

- A poll of students appearing for masters in engineering indicating that 60% of the students believed that mechanical engineering is a profession unsuitable for women. A research study on women with master or higher degrees in mechanical engineering found that 90% of such women were successful in their professions.

Which of the following can be logically inferred from the above paragraph?

Assumptions

- A) Many students have misconceptions regarding various engineering disciplines.
- B) Men with advanced degrees in mechanical engineering believe women are well suited to be mechanical engineers.
- C) Mechanical engineering is a profession well suited for women with masters or higher degrees in mechanical engineering.
- D) The number of women pursuing higher degrees in mechanical engineering is small.

Answer

- Option C)

Question 6

Soumya committee had proposed the establishment of Soumya institutes of Technology (SITs) in line with Indian Institutes of Technology (IITs) to cater to the technological and industrial needs of a developing country ↑.

Which of the following can be logically inferred from the above sentence?
Based on the proposal.

(i) In the initial years, SIT students will get degrees from IIT. ✗

(ii) SITs will have a distinct national objective. ✓

(iii) SITs like institutions can only be established in consultation with IIT. ✗

(iv) SITs will serve technological needs of a developing country. ✓

A) (iii) and (iv) only

B) (i) and (iv) only

C) (ii) and (iv) only

D) (ii) and (iii) only

Answer

- Option C)

Question 7

Michael lives 10 km away from where I live. Ahmed lives 5km away and Susan lives 7 km away from where I live. Arun is farther away than Ahmed but closer than Susan from where I live. From the information provided here, what is one possible distance (in km) at which I live from Arun's place?

A) 3.00 ✗

B) 4.99 ✗

C) 6.02

D) 7.01 ✗

$$\begin{aligned} \text{Michael} &= 10 \text{ kms.} \\ \text{Ahmed} &= \boxed{\text{Stays} \updownarrow 7 \text{ kms.}} \\ \text{Susan} &= [5 - 7] \text{ kms.} \end{aligned}$$

Answer

- Option C)

Question 8

unpredictable

In a world filled with uncertainty, he was glad to have many good friends. He had always assisted them in times of need and was confident that they would reciprocate. However, the events of the last week proved him wrong. They would also do the same to him.

Which of the following inference(s) is/are logically valid and can be inferred from the above passage?

- (i) His friends were always asking him to help them. ✗
- (ii) He felt that when in need of help, his friends would let him down. ✗
- (iii) He was sure that his friends would help him when in need. ✓
- (iv) His friends did not help him last week. ✓

A) (i) and (ii) only

B) (iii) and (iv) only

C) (iii) only

D) (iv) only

Answer

- Option B)

Question 9

Leela is older than her cousin Pavithra, Pavithra's brother Shiva is older than Leela. When Pavithra and shiva are visiting Leela, all three like to play chess. Pavithra wins more often than Leela does. Which one of the following statements must be TRUE based on the above?

- A) When Shiva plays chess with Leela and Pavithra, He often loses. ✗
- B) Leela is the oldest of the three. ✗
- C) Shiva is a better chess player than Pavithra. ✗
- D) Pavithra is the youngest of the three. ✓

Shiva > Leela > Pavithra [Ages]

Pavithra > Leela [wins]

Answer

- Option D)

Question 10

Co~~ol~~=

Pre·

Social science disciplines were in existence in an **amorphous** form until the colonial period when they were institutionalised. In varying degrees, they were intended to further the **colonial interest**. In the time of **globalisation and the economic rise of postcolonial countries like India**, conventional ways of knowledge production have become obsolete.

Which of the following can be logically inferred from the above statements?

Keywords:-

① All ⑥ Every
② None ⑦ Post/
 Autono^m.

- (i) Social science disciplines have become **obsolete**.
 - (ii) Social science disciplines had a pre-colonial origin ✓
 - (iii) Social science disciplines **always promote** colonialism
 - (iv) Social science must maintain **disciplinary** boundaries
- A) (ii) only B) (i) and (iii) only C) (ii) and (iv) only D) (iii) and (iv) only

General Aptitude

PYQ'S on Analytical Reasoning

- II

Question 1

The Venn diagram shows the preference of the student population for leisure activities.

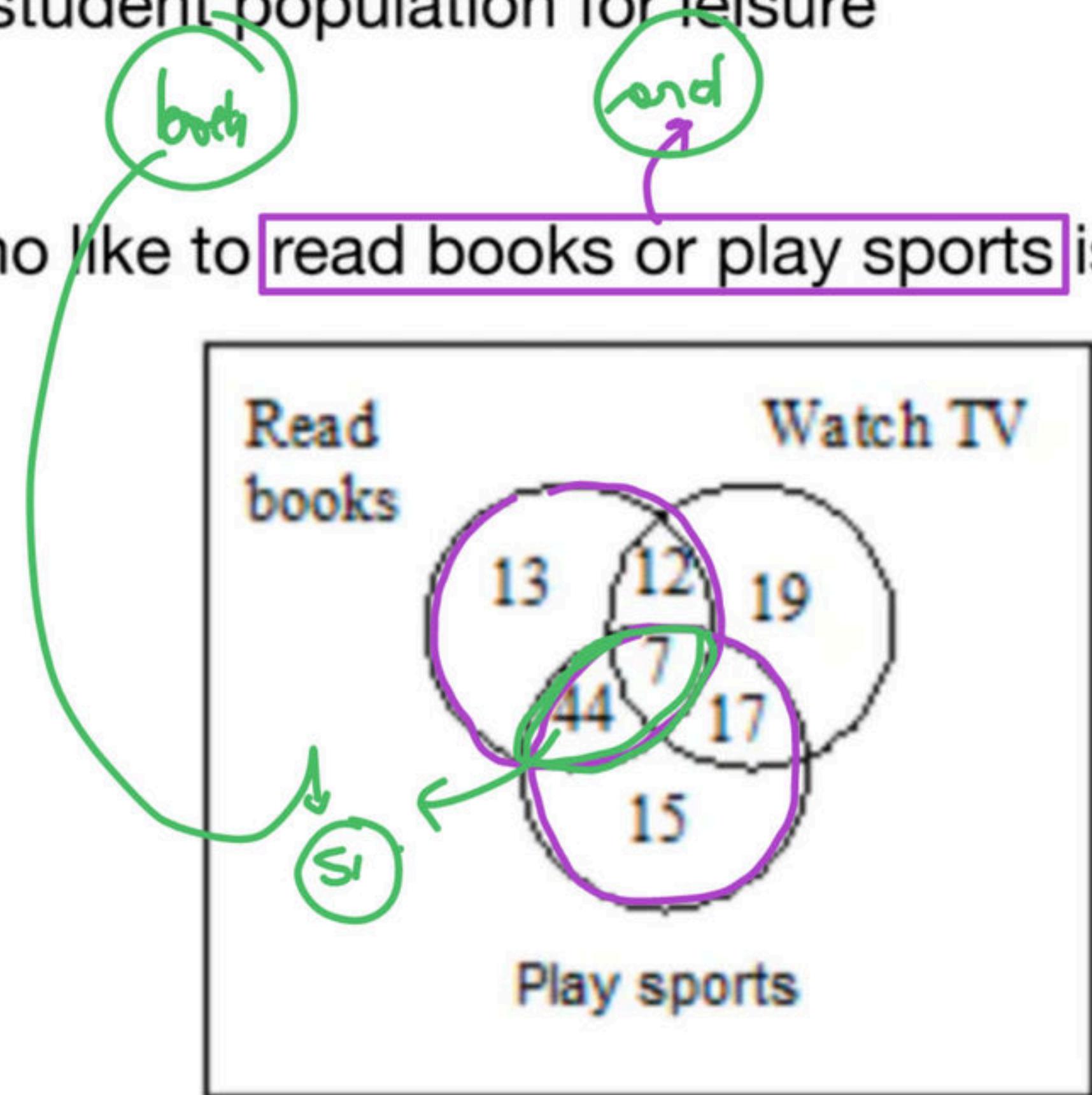
From the data given, the number of students who like to **read books or play sports** is

- A) 44
- B) 51
- C) 79
- D) 108

and = intersection = common

or = Unity = + everything

$$\frac{13+12+44+7}{25} + \frac{15+17}{82} = 51 + 108 = 159$$



Answer

- Option D)

Question 2

dog

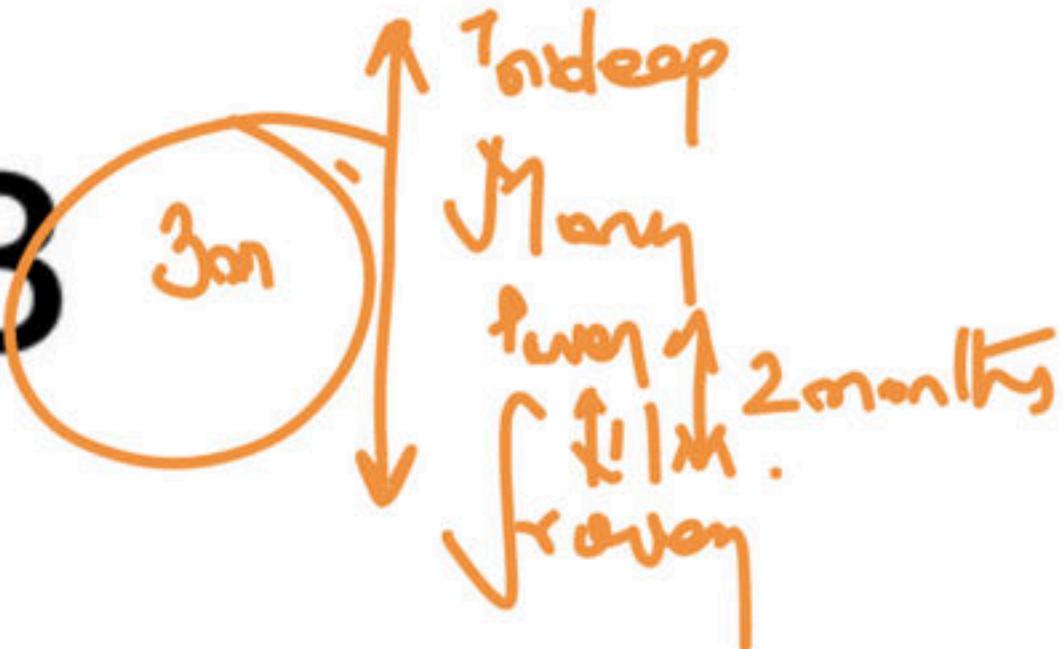
The overwhelming number of people infected with rabies in India has been flagged by the World Health Organisation as a source of concern. It is estimated that inoculating 70% of pets and stray dogs against rabies can lead to a significant reduction in the number of people infected with rabies. Which of the following can be logically inferred from the above sentences?

- A) The number of people in India infected with rabies is high.
- B) The number of people in other parts of the world who are infected with rabies is low. ✗
- C) Rabies can be eradicated in India by vaccinating 70% of stray dogs. ✗
- D) Stray dogs are the main source of rabies worldwide. ✗

Answer

- Option A)

Question 3



A flat is shared by four first year undergraduate students. They agreed to allow the oldest of them to enjoy some extra space in the flat. Manu is two months older than Sravan, who is three months younger than Trideep. Pavan is one month older than Sravan. Who should occupy the extra space in the flat?

- A) Manu
- B) Shravan
- C) Trideep
- D) Pavan

Answer

- Option C)

Question 4



Fact: If it rains, then the field is wet. Read the following statements:

- (i) It rains
- (ii) The field is not wet
- (iii) The field is wet
- (iv) It did not rain

throws water

Which one of the options given below is NOT logically possible, based on the given fact?

A) If (iii) then (iv)

B) If (i) then (iii)

C) If (i) then (ii)

D) If (ii) then (iv)

Answer

- Option C)

Question 5

A smart city integrates all modes of transport, uses clean energy and promotes sustainable use of resources. It also uses technology to ensure safety and security of the city, something which critics argue, will lead to a surveillance state.

Which of the following can be logically inferred from the above paragraph?

(i) All smart cities encourage the formation of surveillance states.

(ii) Surveillance is an integral part of a smart city.

(iii) Sustainability and surveillance go hand in hand in a smart city.

(iv) There is a perception that smart cities promote surveillance.

A) (i) and (iv) only

B) (ii) and (iii) only

C) (iv) only

D) (i) only

Answer

- Option B)

Question 6

Find the missing sequence in the letter series.

A CDEG IJKL MN QRS

B, F, H, L, N, P, -----.

UWY
TVXZ

A) SUWY

B) TUVW

C) TVXZ

D) TWXZ

Answer

- Option C)

Question 7

Jsc

8pm → Cint (morning)
10pm → Cint (afternoon)

If 'relftaga' means carefree, 'otaga' means careful and 'fertaga' means careless, which of the following could mean 'aftercare'?

- A) zentaga
- B) tagafer
- C) tagazen
- D) relffer



Answer

- Option C)

Question 8

Indian currency notes show the denomination indicated in at least seventeen languages. If this is not an indication of the nation's diversity, nothing else is. Which of the following can be logically inferred from the above sentences?

- A) India is a country of exactly seventeen languages.
- B) Linguistic pluralism is the only indicator of a nation's diversity.
- C) Indian currency notes have sufficient space for all the Indian languages.
- D) Linguistic pluralism is strong evidence of India's diversity.

Answer

- Option D)

Question 9

Consider the following statements relating to the level of poker play of four players P, Q, R and S. I. P always beats Q

II. R always beats S

III. S loses to P only sometimes

IV. R always loses to Q

Which of the following can be logically inferred from the above statements?

$Q, S =$

(i) P is likely to beat all the three other players \times

(ii) S is the absolute worst player in the set \times

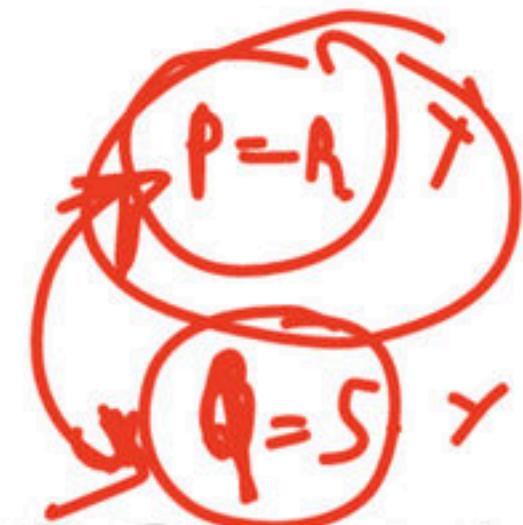
A) (i) only

B) (ii) only

C) (i) and (ii)

D) neither (i) nor (ii)

$$\begin{aligned}P &= S \setminus Q \\P &= R \setminus S\end{aligned}$$



Answer

- Option A)

Question 10

Statement = ~~fx~~

Today, we consider Ashoka as a great ruler because of the **copious evidence** he left behind in the form of **stone carved edicts**. Historians tend to correlate greatness of a king at his time with the availability of evidence today. Which of the following can be logically inferred from the above sentences?

- A) Emperors who do **not** leave significant sculpted evidence are completely forgotten.
- B) Ashoka produced stone carved edicts to ensure that later historians **will** respect him.
- C) **Statues** of kings are a reminder of their greatness.
- D) A king's greatness, as we know him today, is interpreted by historians.

large / lots of.



Answer

- Option D)



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Thank you :)

See you in the next session :)

Answer

- Option A)



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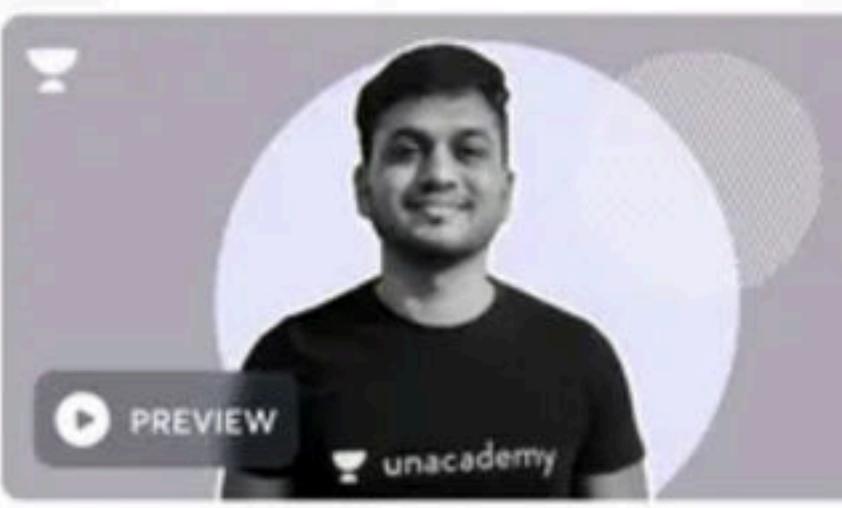


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Thank you :)

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Answer

- Option A)



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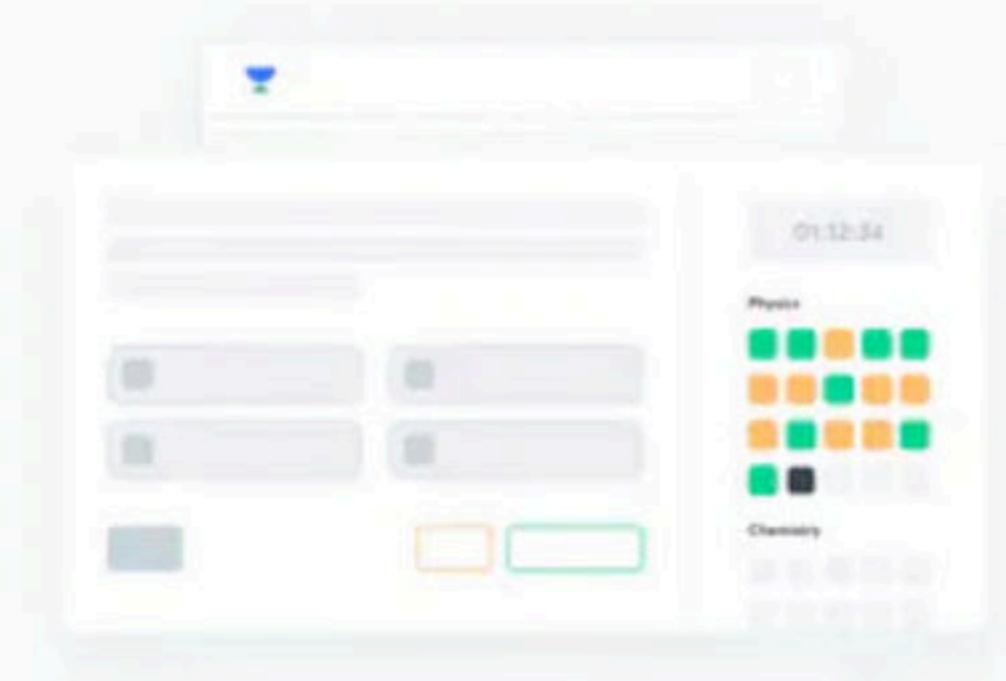
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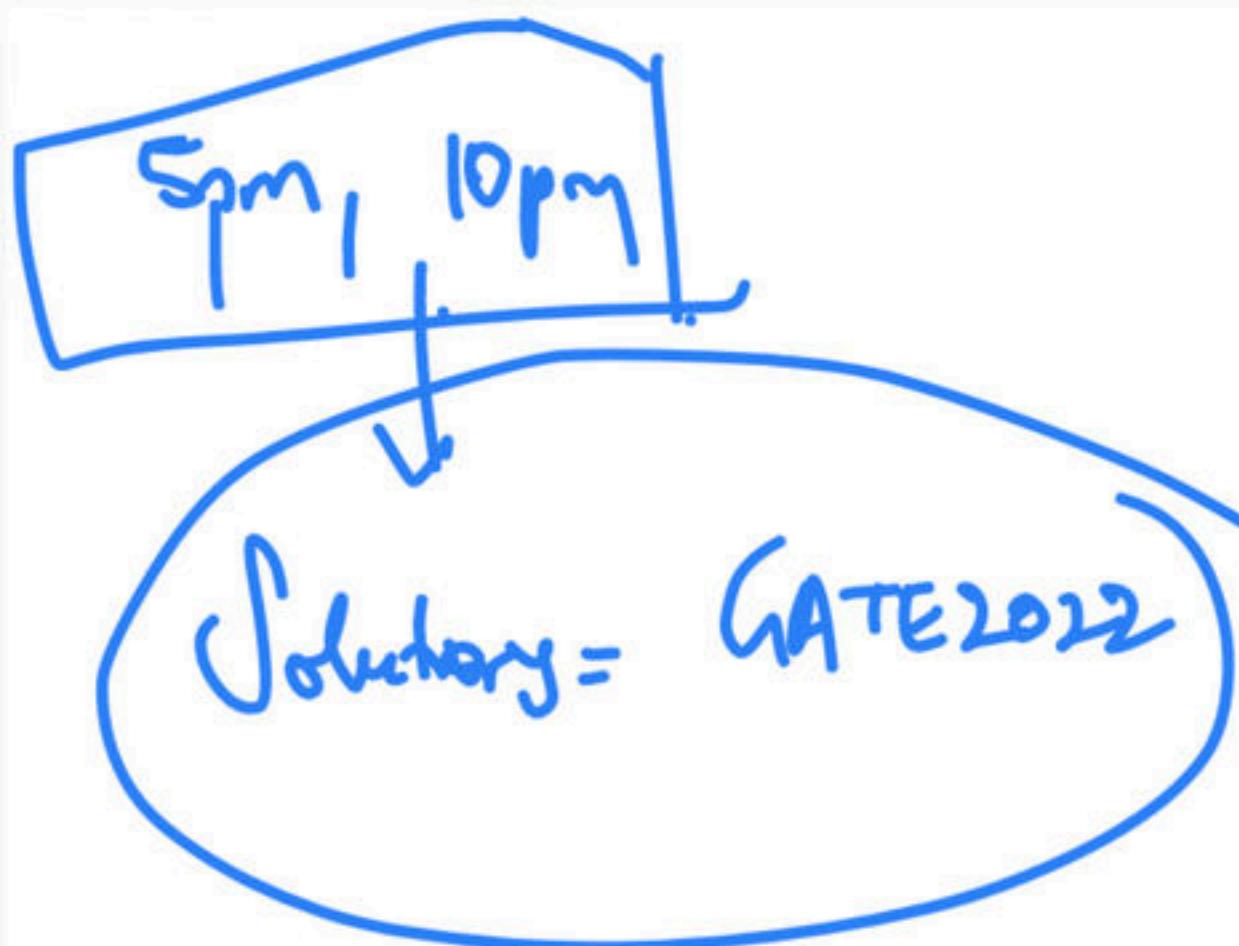


shreyasaravind



Proceed to pay

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Thank you :)

Monday = Quark

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See you in the next session :)