R.C. Reddy IAS Study Circle
UPSC CSE PRELIMS 2026 TEST SERIES
GRAND TEST-01
CSAT
Key & Explanation

Sol.1 (c)

Option a is incorrect- The passage acknowledges that while the internet has democratized access to information, it has also led to information overload and challenges in discerning the quality of content. The passage does not claim that the internet has improved access to quality information; instead, it highlights the complexity and challenges that come with the abundance of information.

Option b is incorrect- The passage suggests the opposite; information overload overwhelms users' cognitive capabilities and affects their ability to focus and make informed decisions. The passage does not suggest that information overload enhances cognitive capabilities; rather, it presents it as a challenge to navigate.

Option c is correct- The passage concludes with the importance of developing digital literacy skills to effectively navigate the landscape of information overload. It implies that digital literacy enables individuals to distinguish between valuable content and mere noise, which aligns with the passage's message about managing the challenges of information overload.

Option d is incorrect- The passage implies the contrary by stating that the constant stream of information leads to confusion and affects the ability to make informed decisions. The passage suggests that the abundance of information often leads to a sense of being lost, not simplifying decision-making processes.

Sol.2 (b)

Option a is incorrect - It contradicts the passage, which emphasizes the multifaceted benefits of urban green spaces beyond mere aesthetics. Aesthetics was not considered the primary reason but sustainable living is given more importance in the passage.

Option b is correct - It encapsulates the passage's overarching message that urban green spaces are vital for sustainable urban living, highlighting their environmental, health, social, and economic benefits.

Option c is incorrect – The passage makes that the green spaces is fraught with challenges including budget constraints in making it a reality in the urban spaces. Hence it contradicts the option given.

Option d is incorrect - It misrepresents the passage's discussion on balancing economic considerations with environmental benefits in the development of urban green spaces

Sol.3 (d)

Option a is incorrect - The passage clearly states that the development and maintenance of urban green spaces face challenges, including budget constraints. \

Option b is incorrect - The passage mentions the underappreciated economic benefits of green spaces, but also acknowledges the competing priorities of urban planning that might favor development over green spaces.

Option c is incorrect - The passage specifically identifies the relentless pressure of urban sprawl as a challenge to creating and maintaining green areas.

Option d is correct - The passage suggests that community engagement is beneficial for the development of urban green spaces, not detrimental.

Sol.4 (c)

Consider the whole distance to be x.

x/2 travel is with speed v. => t1 = x/2v

x/4 travel is v/2 => t 2= x\ 4/ v/2
And the next x/4 travel is 2v. => t3 = x / 4 / 2v
Average speed = total distance / total time
Average speed = x/ (t1 + t2 + t3) = 8/9 v.

Sol. 5 (a)
Class A - [17 – 23]
Class B - [21 – 30]
Since there is overlap in the range of marks of two classes.
Exchange of students can lead to increase or decrease of average of both classes. But nothing can be concluded definitely.
So, statement 1 is correct as it is possible for class B average to increase.
Statement 2 is incorrect as it is not definite whether class A will increase.

Sol.6 (a)
For cubes at least one face painted, We have to find the number of cubes having no face painted ie internal cubes.
There are 64 cubes. Now 64= 4^3, So, n = 4
Number of internal cubes = (n - 2)^3 = (4 - 2)^3 = 2^3= 8
So, 8 cubes have no face painted.
So, cubes with at least one face painted is 64 – 8 = 56

Sol.7 (a)
Container X contains 100 ml of milk and container Y contains 100 ml of water.
If 20 ml of milk transferred from container X to container Y, then:
Amount of milk left in container X = 100 – 20 = 80 ml
Amount of solution in container Y becomes = 100 ml water + 20 ml milk = 120 ml
Ratio of milk and water in container Y = 20 : 100 = 1 : 5
Amount of milk in 20 ml solution of container Y = (1/6) × 20 = 3.33 ml Amount of water in 20 ml solution = 20 – 3.33 = 16.67 ml
If 20 ml of this solution is transferred from container Y to container X, then:
Amount of solution in container X becomes = (80 + 3.33), i.e. 83.33 ml milk + 16.67 ml water
Amount of solution in container Y becomes = (100 – 16.67), i.e. 83.33 ml water + (20 – 3.33), i.e. 16.67 ml milk
As per the question, m denotes the proportion of milk in X, and n denotes the proportion of water in Y.
So, m = 83.33 ml and n = 83.33 ml Thus, m = n

Sol.8 (c)
The gap between numbers is increasing so it is not a case of simple addition.
But gap is not as high to be as high for a case of multiplication.
So, we find the difference between numbers in the sequence.
16 – 10 = 6
26 – 16 = 10
40 – 26 = 14
58 – 40 = 18
80 – 58 = 22
We can see that the difference in the sequence is increasing by 4 at each place. So, the next difference will be 22 + 4= 26. So, the next number in the sequence is 80 + 26 = 106.

Sol.9 (c)
AB + CD = 111, wherein A, B, C and D are distinct non-zero digits.
For resultant of 111, unit digit needs to be 1
B + D = 11, because it cannot be 1,21 or anything
Now resultant to be 111, A+C+1= 11
This implies A+C = 10
So, A + B + C + D = 10 + 11 = 21

Sol. 10 (b)
Statement 1 is incorrect: if one of a and b are odd and other is even, then a x b is even and c x d is also similarly even because one will be odd and other will be even.
even number – even number is always even.
Statement 2 is correct: a x b x c is always even because it certainly has one even number. d is either odd or even. But in both cases 2 x d is even.
even number – even number is always even.

Sol.11 (b)
(a) Incorrect: The passage criticizes treating climate change as a conventional environmental policy issue rather than endorsing it.
(b) Correct: It captures the core argument that separating ecology from politics leads to misunderstanding climate change's planetary nature.
(c) Incorrect: The passage presents political geoecology as an analytical lens, not as a replacement governance model for sustainability.
(d) Incorrect: While modern societies are linked to ecological systems, the passage's focus is on political-ecological integration, not primary dependence on resource extraction.

Q.12 (a)
Statement (1) is valid as the passage repeatedly emphasizes stewardship rather than hegemony, contested leadership, and partnerships grounded in mutual benefit, implying that dominance alone cannot sustain India's maritime role.
Statement (2) is not valid as the passage explicitly notes China's assertive presence, conditional Western support, and divergent trajectories of the Global South, indicating the absence of uniform external support.

Q.13 (c)
Option (c) is correct as it integrates all core elements of the passage: the necessity of maritime power, the contested environment, and the proposed path of stewardship, partnerships, and realism rather than dominance.
Option (a) is incorrect because it captures important components (naval, economic, diplomatic) but misses the passage's normative recommendation - 'by pursuing stewardship rather than hegemony, by aligning economic power with naval reach, and by crafting partnerships grounded in mutual benefit rather than dominance.'
Option (b) is incorrect as the passage does not argue that competition constrains ambition altogether; instead, it suggests ambition must be pursued differently.
Option (d) is incorrect because while geopolitical pressures are acknowledged, the passage frames India's maritime turn as strategic and necessary, not merely reactive.

Sol.14 (a)
Let us decode step by step:
• A is brother of B → A is male, B is sibling (gender not specified).

• C is mother of A → C is also mother of B.
• D is sister of C → D is maternal aunt of A & B.
• E is husband of D.
• F is son of E → F is son of D & E

So:
• A and F share maternal grandparents → cousins
• Statement I → Correct
• Statement II → B's gender is not given → cannot conclude B is daughter
Only I is correct

Sol.15 (d)
• 15th August 2021 = Sunday → Person born on Sunday = C
• From (1): A is third to the right of C
• From (5): E is immediately right of C
So sequence around
C: C – E – ? – A
Now B sits immediately left of A → B comes just before A
D sits at one end
Final correct order (left to right):
D/F – C – E – B – A – D/F
⇒ Both Statement I and II are not correct

Sol.16 (b)
On combining the statements, we get
$J \leq P < U \leq M$, $D \geq S \geq U > P$
I. $J \leq M$ (False)
II. $D > P$ (True)
Hence, only Conclusion II is true.
Conclusion I : $J \leq M$
From statement (2):
$J < P < U$
From statement (1):
$U \leq M$
So,
$J \leq M$ (False)
Conclusion I is not true
Conclusion II: $D > P$
From statement (1):
$D \geq U$
From statement (2):
$P < U$ So, $D \geq U > P \Rightarrow D > P$
Conclusion II is true

Sol.17 (d)
So, the persons we need to consider are: A, B, C, D, E, and F, i.e. 6 in total.
We must use statements 2 and 3, as C has been mentioned only in statement 2, and E has been mentioned only in statement 3. Now, we need to account for A, B, D and F.
We can account for A and B using statement 1, and for D and F using statement 4.

Using statements 1 and 3, we get:
A > B > E
Using statements 2 and 4, we get:
C = D > F
However, we still need statement 5 to find out the relative position of these two groups. Using statement 5, we get:
C = D > F > A > B > E
So, C and D are the richest and to find this out we need to use all the given five statements. Hence, option (d) is correct.

Sol.18 (c)

A - 1, B - 2, C - 3, D - 4, E - 5, F - 6, G - 7, H - 8, I - 9, J - 10, K - 11, L - 12, M - 13, N - 14, O - 15, P - 16, Q - 17,

R - 18, S - 19, T - 20, U - 21, V - 22, W - 23, X - 24, Y - 25, Z – 26

From GAIN to JENT

G=7, 7 + 3 =9 -> J --> 3 forward

A=1, 1 + 4 = 5 -> E --> 4 forward

I= 9, 9 + 5 =14 --> N -> 5 forward

N=14, 14 + 6= 20 --> T --> 6 forward

So pattern is first 3 forward, 4 forward, 5, 6 so on For TABLE

T – 3 forward – W

A – 4 forward -- E

B - 5 forward – G

L – 6 forward – R

E – 7 forward – L

So, TABLE is code as WEGRL

Sol.19 (d)

The given sequence: ABC_BCD_CDABDA_C _BCD We can break this sequence in five sets of 4 elements each. On analyzing it in this manner, we can see that the last element moves to the first position in a cyclic manner.

The complete sequence is: ABCD BCDA CDAB DABC ABCD

Hence, option (d) is correct.

Sol.20 (d)

Conclusion 1 is incorrect: if B is true -> two cases either a can be true / false. If A to be false, C has to be false. (statement 1) But if A is True, we have no judgement about C even if B is correct. This conclusion is not necessarily correct.

Conclusion 2 is incorrect: if E is false --> then we have no information as to what happens. The conditional statements are read straight and cannot be inverted in their sense.

This conclusion is incorrect.

Hence, option (d) is correct

Sol.21 (b)
Statement (1) is valid as the passage notes that India's hydrocarbon potential remains "largely untapped" despite reforms.
Statement (2) is valid as the passage stresses the need to move toward "integrated, data-rich subsurface intelligence."
Statement (3) is not valid as the passage does not suggest that foreign capital dependence constrains exploration.
Statement (4) is valid as the passage cautions that technology must be "contextually relevant" to India's geological diversity.
Statement (5) is valid as the passage explicitly calls for deeper collaboration across multiple stakeholders.

Sol.22 (c)
Statement (1) is valid as the passage argues that despite reforms, urgent interventions, mindset change, and collaboration are required.
Statement (2) is valid as AI and cloud tools are said to identify not only hydrocarbons but also carbon capture, geothermal energy, and low impact alternatives.
Statement (3) is not valid as the passage explicitly rejects uniform solutions, emphasizing contextually relevant approaches.

Sol.23 (d)
Option (a) is incorrect as the passage discusses conversion of Geranium waste into biochar for soil improvement and carbon storage, not its use as a renewable fuel source.
Option (b) is incorrect because the passage does not provide evidence that the process is low-cost or energy-efficient, nor does it specifically state that it is attractive to farmers.
Option (c) is incorrect since the passage talks about utilizing existing Geranium waste, not encouraging farmers to cultivate Geranium specifically for fertilizer use.
Option (d) is correct as the passage emphasizes that processing Geranium waste into biochar can improve soil quality, store carbon, reduce environmental impact, and enhance crop yields across India, making this the most logical and practical implication.

Sol.24 (d)
Option a is incorrect: The passage highlights that how the last decade was an uncertain period for Indian economy, even though the overall efficiency increased because of the government reforms and diverse measures the problem such as balance sheet stress have adversely impacted the growth in this period.
Option b is incorrect: the passage has highlighted a lot of structural reforms measures taken by the government such as creating public goods adopting trust-based governance, private sector participation and improving agricultural productivity but however these structural reforms have not been able to materialize in terms of economic growth.
Option c is incorrect: The passage has highlighted the adverse impact on the economy due to the balance sheet is stressed caused by the credit boom in the previous years and also on of global socks that followed. It is not because of the lack of reforms.
Option d is correct: passage has highlighted that in spite of the reforms due in spite of reforms the other factors like balance height seat is stressed and on of global socks could not allow the economy to grow in during this. So this is an important message that any reform measures to transform into economic growth required other favorable conditions.

Sol.25 (a)
The unit digit of the resultant number only depends on the unit digit of the given number.
For unit digit (721 x 693)^123456789 is same as (1 x 3)^123456789 →(3)^123456789.

3^1=3, 3^2=9, 3^3=27, 3^4=81, 3^5=243, 3^6=729
Unit digit in numbers formed by exponents to 3 follow cyclical order of four values as 3,9,7,1.
Unit digit in (3) ^123456789, will determine by determining the remainder of exponent with 4.
As per divisibility rules for 4, remainder of a number (123456789) is same as remainder with last two digits i,e 89.
Reminder of 89 with 4 is 1.
So, the remainder of 123456789 with 4 is 1.
As the remainder is one. We take 1st item after complete cycles (3,9,7,1) is 3.
Hence, 3 is the unit digit in the expansion.

Sol.26 (a)
To find the minimum length that can be measured using two scales of length 5 cm and 7 cm respectively, we need to determine the highest common factor (HCF) of 5 and 7.
The factors of 5 are 1 and 5.
The factors of 7 are 1 and 7.
The highest common factor (HCF) of 5 and 7 is 1.
Therefore, the minimum length that can be measured using two scales of length 5 cm and 7 cm respectively is 1 cm.

Sol.27 (d)
As the last digit is zero one of the digits is must be 5 and the other must be even ie multiple of 2.
Possible combinations are 52,25, 54,45, 56,65
We can check by multiplying 56 x 65 = 3640
Thus difference between the numbers = 9

Sol.28 (d)
x + 0.60x = 2y
x - 0.60x = 1/2z
1) From the first equation:
1.60x = 2y
y = 0.80x
2) From the second equation:
0.40x = ½ z
z = 0.80x
Comparing the values, we can see that y = z
Hence correct answer will be none of above

Sol. 29 (b)
The password has two separate parts to be rearranged which do not interchange positions and thus can be separately operated.
ABC and 123
Number of ways to arrange ABC = 3! = 6
Number of ways to rearrange 123 = 3! = 6
Now for a complete password using ABC and 123
From the rule of multiplication
Total number of ways = 6 x 6 = 36.

Sol.30 (a)
- Total weight of 6 persons (A, B, C, D, E, F) = 6 * 40 = 240 kg

- Removing A, average weight becomes 38 kg, so the total weight without A = 5 * 38 = 190 kg
- Removing B, average weight becomes 46 kg, so the total weight without B = 5 * 46 = 230 kg
Weight of A = 240 – 190 = 50
Weight of B = 240 – 230 = 10
Total weight of without A and B (W) = 240 - (50 + 10)
= 240 - 60
= 180 kg
Average weight by removing both A and B = Total weight without A and B / Number of persons without A and B
= 180 / 4 = 45 kg
Therefore, the average weight by removing both A and B is 45 kg.

Sol.31 (b)
Option a is incorrect - The passage suggests that Deep Ecology requires a profound transformation in human interaction with nature and a re-evaluation of society's values and consumption patterns, implying that significant adjustments would be necessary.
Option b is correct - The passage highlights that Deep Ecology advocates for a profound transformation in human interaction with nature, including adopting simpler lifestyles and reducing consumption, which would lead to significant lifestyle changes.
Option c is incorrect - The passage contrasts Deep Ecology with mainstream environmentalism, emphasizing the intrinsic value of all living beings, not just their utility to humans, suggesting a divergence rather than alignment.
Option d is incorrect - The passage states that Deep Ecology challenges the anthropocentric view by emphasizing the interconnectedness and equal rights of all forms of life, suggesting incompatibility with the anthropocentric view that prioritizes human needs.

Sol.32 (c)
Option a is incorrect- While the passage mentions security as one aspect of blockchain technology, it does not suggest that this is the primary focus of Norque's integration of these technologies.
Option b is incorrect- The passage clearly discusses Norque's innovative approach beyond just the economic benefits of cryptocurrencies, including its application of blockchain for decentralization and the metaverse for immersive virtual environments.
Option c is correct- This statement encapsulates the essence of the passage, highlighting the comprehensive nature of Norque's project in combining blockchain, cryptocurrency, and the metaverse to transform digital interactions and financial transactions.
Option d is incorrect- Although the passage acknowledges challenges, it does not specify that technological complexity and user accessibility are the main hurdles; rather, it points to scalability, regulatory compliance, and user adoption as significant challenges.

Sol.33 (c)
Option a is incorrect- The passage suggests the introduction of a digital currency within the Norque ecosystem as a feature, not a limitation.
Option b is incorrect- It contradicts the passage's point that Norque aims to reduce transaction costs by eliminating traditional financial intermediaries, thereby not presenting high transaction costs as a challenge for Norque.
Option c is correct- The challenges like Scalability, regulatory compliance, and user adoption are explicitly mentioned in the passage as significant hurdles for the Norque project, reflecting issues common to innovative technological projects.

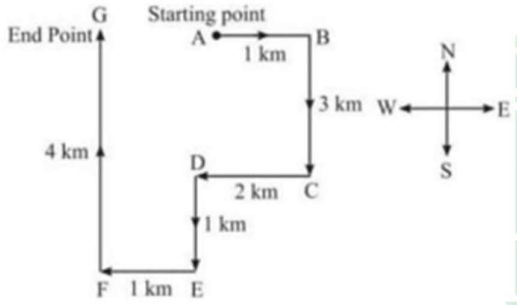
Option d is incorrect- The passage indicates that Norque has an economic model based on a digital currency that incentivizes participation, which implies that there is already an economic model in place to encourage user engagement.

Sol.34 (c)

Let the son's current age be y years.
Therefore, the mother's current age is 5y years.
In 4 years, the mother's age will be 5y+4 and the son's age will be y+4.
According to the question, 5y+4= 3(y+4).
Solving this equation gives y=4, making the son's current age 4 years and the mother's 20 years.
In another 10 years (4 years + 6 years), the son will be 14 and the mother 30 years old.
Therefore, the mother will be 30/14 = 2.1 or approximately 2.1 times her son's age.

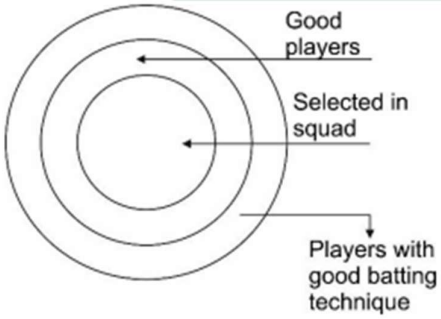
Sol.35 (d)

Since the boy walks towards the Sun in the morning, he must be walking towards the East direction. The path taken by him has been depicted below:



The boy moves in the sequence:
A→B → C → D → E → F → G
Required distance = 1 + 2 – 1 = 2 km
Thus, he is 2 km away from the starting point.
Hence, option (d) is correct.

Sol.36 (a)



Conclusion 1 is correct: Players selected in squad are certainly good players. Good players certainly have good batting technique. So, this conclusion is followed as per the statement. Conclusion 2 is incorrect: converse of statements cannot be called to hold. So as player without good batting technique are not good players.

This doesn't mean that players with good batting technique will bw good players. This conclusion is incorrect.

Hence, option (a) is correct

Sol.37 (c)
Statements:
1) If a person owns a car, they must have a driver's license.
2) If a person has a driver's license, they must be at least 18 years old.
3) Rajesh owns a car. From statement 3, we know that Rajesh owns a car.
According to statement 1, if a person owns a car, they must have a driver's license.
Therefore, we can conclude that Rajesh has a driver's license.

Now that we know Rajesh has a driver's license, we can refer to statement 2, which says that if a person has a driver's license, they must be at least 18 years old.
Since Rajesh has a driver's license,
we can conclude that Rajesh is at least 18 years old.
Conclusions:
1) Rajesh is at least 18 years old. (True)
2) Rajesh does not have a driver's license. (False)
3) Rajesh has a driver's license. (True)

Sol.38 (b)
Statement 1 is incorrect: The speed of minute hand relative to hour hand is 5.5o per minute. At 5 pm minute hand is 150 behind hour hand. To coincide it take 150/5,5 = 27.27 minutes. So, it won't coincide between 5: 28 and 5: 29.
Statement 2 is correct: as second hand passes minute hand once in every minute so second statement is correct.

Sol.39 (c)
Suppose that total volume is 100 ml.
Pure alcohol amount initiatlly = 30 % = 30 ml
Pure alcohol amount Finally = 20 % = 20 ml
Net alcohol withdrawn in replacement = 30 – 10 ml
In initital mixture for 30 ml alcohol, mixture taken = 100 ml
For 10 ml alcohol, we need 10 x 100/30 = 33.33 ml of mixture.
Mixture withdrawn = 33.33 ml = replacemnt by water.
Fraction reaplced = 33.33/100 = 1/3
Hence option c is the correct answer.

Sol. 40 (c)
Pattern in sequence 1 is
6
6 X 1.5 = 9
9 x 2 = 18
18 x 2.5 = 45
45 x 3 = 135
Similarly for sequence 2
8
A = 8 x 1.5 = 12
B = 12 x 2 = 24
C = 24 x 2.5 = 60

D = 60 x 3 = 180
Hence option c is the correct answer.

Sol.41 (b)
Statement 1 is incorrect: The Passage suggests that while decentralization of governance in form of Panchayati Raj and Gram Swaraj, is advocated as a means to minimize the structural violence. However, it does not infer that it provides a pathway to eradicate it completely.
Statement 2 is correct: This assumption is supported by Gandhiji's philosophy as visible in this phrase of the passage "The moral leadership which Gandhiji calls for, to create a society free from exploitation and marginalization of structural violence, is not the imposition of one's will on others, but employee the supremacy of reason and love to one's life and related institutions". Hence, this assumption is valid Source: Yojana Magazine

Sol.42 (c)
Option a is incorrect: While fostering mutual respect and cooperation is indeed important, it is not the primary focus of Gandhiji's model of trusteeship as described in the passage.
Option b is incorrect: Imposing strict regulations on Industries may ne necessary in some cases, but it does not reflect the Gandhi Ji's idea of trusteeship to address the modern crisis.
Option c is correct: This phrase is found in the following sentence in the passage: "Gandhiji's concept of aparigraha (non-possession) and its institutionalized form of "trusteeship" are relevant in addressing this problem." He emphasized the principle that individuals should not accumulate wealth or power for personal gain, but rather should hold their resources in trust for the benefit of the entire community. This sentence directly states Gandhiji's model of trusteeship, which is based on the idea that individuals should hold their resources in trust for the benefit of the entire community. This principle is seen as a way to address the modern crisis and promote a more just and peaceful society.
Option d is incorrect: While cultivating a sense of social responsibility and shared ownership is indeed a key aspect of Gandhiji's model of trusteeship, the emphasis is not solely on fostering sustainable development and community well-being. The primary focus is on the responsible and ethical management of resources for the common good, with sustainable development and community wellbeing being outcomes of this approach rather than the sole focus.

Sol.43 (b)
The passage states that the multifaceted nature of art movements demonstrates a complex interaction between aesthetic values and sociopolitical contexts. This implies that the emergence of art movements primarily indicates the influence of these factors.

Sol.44 (b)
Statement 1 is incorrect: The passage does not make this assumption, and there is no evidence in the passage to support them. While some artists may be aware of the socio-political context, others may not be, and their work may be more focused on artistic expression than social commentary. There is universal statement that all artists are aware of the socio-political context.
Statement 2 is correct: The passage discusses how art movements, such as Cubism and Dadaism, emerged as responses or rejections to the artistic traditions and societal changes of their times. It also highlights how these movements reflect the cultural and social changes of their respective eras.

Sol.45 (d)
Assumption 1 is Incorrect- While parental involvement is important, it does not guarantee academic success and overall development as there are various other factors at play. **Assumption 2 is Incorrect -**

The passage mentions that parental involvement can take various forms, not limited to monitoring homework and attending school events, suggesting that this assumption is not correct.

Sol.46 (a)

Option a is correct-The passage emphasizes that parental involvement significantly contributes to children's academic success and overall development, aligning with the most logical and rational message conveyed by the author.

Option b is incorrect- While parental involvement is important, academic success and overall development are influenced by various factors beyond parental involvement alone.

Option c is incorrect- The passage mentions that parental involvement can take various forms, not limited to monitoring homework and attending school events, suggesting that this option is not correct.

Option d is incorrect-The passage highlights the importance of parental involvement in children's education, suggesting that it does have an impact on children's educational outcomes.

Sol.47 (d)

It's given that, ABC × D = 31DD

Wherein A, B, C and D are different non-zero digits.

So, ABC = 31DD = (3100 + 10D + D) = 3700 + 11D

As 31DD is divisible by D => (3100 + 11D) / D = ABC

=> ABC = 3100/D + 11

For 3100/d to whole number, possible values of D are 1, 2, 4 and 5 only. Now as D x three-digit number (max 999) > 3000, then D is definitely greater than 3.

So possible values of D are 4 and 5 only.

Now checking

For D=4,

ABC = 3144/4 = 786 – possible as ABC has three different digits.

A+B-C = 7 + 8 – 6 = 9

For D=5,

ABC = 3155/5 = 631 – possible as ABC has three different digits.

A+B-C = 6 +3 – 1 = 8

So, the possible values are 8 or 9. and can't be determined with given information with certainty.

Sol.48 (a)

Days in a week repeat in cycle of 7.

For any numbers of days, we need to find remainder when divided by 7. Remainder 8^88 / 7

Using remainder rule -> number can be replaced with reminder Remainder 8/ 7 = 1

Remainder 8^88 / 7 = 1^88 = 1

As the remainder is 1 the day is Monday

Sol.49 (c)

Let X be the total number of items and P be the initial price.

As 20 % items got damaged, remaining items = X- 20/100 X = 0.80 X Now for getting the same revenue,

=> X x P = 0.8 X x P'

=> p' = 1/.8 P = 1.25 P

Percent increase in price (1.25 P – P) / P x 100 =25 %

Sol.50 (c)

To find the total number of handshakes, we can use the combination formula, which is

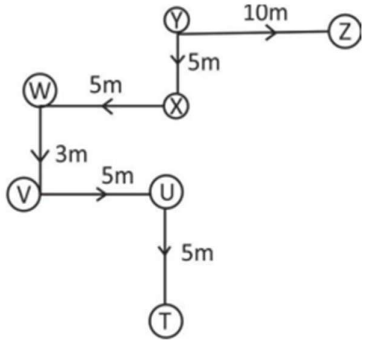
nCr = n! / (r! * (n - r)!), where n is the total number of players and r is the number of players in each team

(since each player shakes hands with all players in their own team).
In this case, there are 11 players in each team, so:
Total handshakes = (11C2) for Team India + (11C2) for Team Australia
= (11! / (2! * (11 - 2)!)) + (11! / (2! * (11 - 2)!))
= (11! / (2! * 9!)) + (11! / (2! * 9!))
= (11 * 10 / 2) + (11 * 10 / 2)
= (55) + (55)
= 110
So, there will be a total of 110 handshakes.

Sol.51 (d)
Suppose the present age of B is b years.
At the time of birth of age of A was 3b (given).
Current age of A = 3b + b = 64
=> b = 16
So the current age of A = 64, B = 16 years.
8 years ago
age of A = 56 , age of B = 8
A is 7 times B => statement 1 is wrong
After 16 years
Age of A= 80 , age of B 32
A is 2.5 times B => statement 2 is also wrong
So, option d is the correct answer.

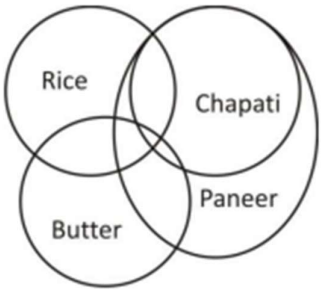
Sol.52 (c)
As the ratio of marks of papers is given,
We assume the marks of papers as 5x, 6x, 7x, 8x, 9x, 10x
The difference between highest and lowest marks = 10x – 5x = 5x
It given that the difference is 35.
=> 5x = 35
=> x = 7
Marks of different papers
5x = 35
6x = 42
7x = 49
8x = 56
9x = 63
10x = 70
So, papers with less than 60 % percent marks are 35, 42, 49, and 56.
So there are 4 such papers. Hence c is the correct option.

Sol.53 (d)

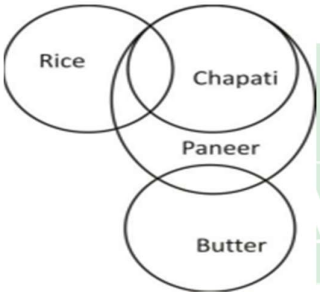


Required distance = (5 + 3)2 + 102 = (164)1/2 = 12.8 m
Thus, point U is 12.8 m, in South-West direction from point Z.
Hence, option (d) is correct.

Sol.54 (c)
Based on the statement, two of the possible scenarios are depicted below:



Or



By looking at both the diagrams, we can conclude that, Conclusion-I follows.
By looking at the both diagrams, we can conclude that Conclusion-II also follows.
Hence, option (c) is the correct answer

Sol.55 (d)
Assumption 1 is Incorrect - While external influences are acknowledged, the passage suggests that internal factors such as generational shifts also play a significant role in the decline of cultural values.
Assumption 2 is Incorrect - The passage does not imply that the erosion of traditional cultural values is inevitable or irreversible; rather, it highlights the challenges posed by this trend.

Sol.56 (c)
Option a is incorrect- While external influences are acknowledged, the passage suggests that internal factors also play a significant role in the decline of cultural values.

Option b is incorrect-The passage does not imply that the erosion of traditional cultural values is irreversible; rather, it highlights the challenges posed by this trend.
Option c is correct- The passage emphasizes the multifaceted challenges posed by the decline in adherence to cultural values and the need for a nuanced understanding of the factors contributing to this trend.
Option d is incorrect- The passage suggests that internal factors such as generational shifts also play a significant role in the decline of cultural values, contradicting this option.

Sol.57 (c)
Option (c) is correct because the passage states that advisers with prior misconduct or working in high-misconduct firms are "often completely unaffected by the ethics exam" and that firm level "contagion of misconduct" weakens ethics training. This implies exams alone are insufficient as a primary deterrent.
Option (a) is incorrect as the passage explicitly notes that the least experienced advisers are most responsive to ethics testing.
Option (b) is incorrect because the passage emphasizes firm-level contagion, implying support for broader interventions beyond individual testing.
Option (d) is incorrect as addressing organizational culture directly aligns with the passage's concern about misconduct being reinforced at the firm level.

Sol.58 (c)
Assumption 1 is valid The passage contrasts traditional riverine flooding (Ganga–Brahmaputra) with the rising incidence of pluvial flooding in urban centers. It clearly implies that approaches focused mainly on major rivers are insufficient to address emerging urban flood risks driven by drainage failure and intense rainfall.
Assumption 2 is valid The passage states that the re/insurance sector can absorb financial losses and emphasizes the need for viable flood insurance solutions, supported by robust risk assessment and data. This implies that financial risk transfer mechanisms are an important component of long-term flood resilience, even though they must be complemented by broader stakeholder collaboration.

Sol.59 (c)
Option (c) is correct as it captures the passage's central argument: India's flood risks are changing, especially in urban areas, necessitating coordinated mitigation, resilience-building, and sophisticated risk assessment across stakeholders.
Option (a) is incorrect as it focuses narrowly on causes of urban flooding and misses the emphasis on insurance, resilience, and systemic planning.
Option (b) is incorrect because the passage treats insurance as supportive, not sufficient or central.
Option (d) is incorrect as the passage explicitly contrasts traditional riverine flooding with the rising significance of urban pluvial flooding.

Sol.60 (d)
Statement 1–Correct: The passage identifies the single-operator model as the core constraint, logically implying the need for multiple parallel operators.
Statement 2–Correct: The gap between 100 GW targets and NPCIL's limited, delayed execution shows targets must align with institutional capacity.
Statement 3–Correct: NPCIL's dependence on competing budgetary allocations implies the need for dedicated, ring-fenced financing mechanisms.
Statement 4–Correct: Chronic delays and scale overload indicate the need for decentralized and accountable project execution structures.

Statement 5–Incorrect: The passage highlights execution and capacity constraints, not technology gaps, making this implication unsupported.

Sol.61 (b)
suppose the principal is P.
Case 1 – compounding in 1 year
Amount = P x (1 + 20/100) = 1.2 P
Case 1 – compounding in half-year
Amount = P x (1 + 10/100)2 = 1.21 P
% change = (B-A) / A x 100 = 0.01/.2 x 100 = 5/6 %

Sol.62 (b)
10 M + 12 W --> 30 days = 1/30 work in one day
12 M + 10 W --> 20 days = 1/20 work in one day
If we add both the equations
22 M + 22 W -- > 1/30 + 1/20 = 1/ 12 work each day
So it will take 12 days for 22 men and 22 women to finish the work.

Sol.63 (d)
Given that,
A train 200 meters long is moving at the rate of 40 km/h.
Now,
Time to cross the man = M
Time = 200/(40 x 5/18) = (200 x 9)/100 = 18 seconds
Hence option (d) is correct

Sol.64 (c)
Given that,
In a group of persons travelling in a bus 6 persons can speak Tamil, 15 can speak Hindi and 6 can speak Gujarati. In that group none can speak any other language. 2 persons in the group can speak two languages only and one person can speak all the three languages.
Now,
Assuming two people can speak Tamil and Hindi both.
Number of people speaking only Tamil = 6 - 1 - 2 = 3
Number of people speaking only Hindi = 15 - 2 - 1 = 12
Number of people speaking only Gujarati = 6 - 1 = 5
Total number of people speaking only 1 language = 3 + 5 + 12 = 20
2 persons in the group can speak two languages only and one person can speak all the three languages = 2 + 1 = 3
Total = 20 + 3 = 23
Hence option (c) is correct

Sol.65 (b)
Suppose the initial price is p1 and new price is p2.
Now as he gives 20% discount on new price to reach to same old price. P2 – 20/100 x p2 = p1
P1 = 0.80 p2
P2 = p1 x 1.25
% change in price = (new price – old price) / old price x 100
= (p2 - p1)/ p1 x 100

= 25 %
Hence option b is the correct option.

Sol.66 (b)
To find the maximum number of attempts we need to visualize the worst-case scenario.
To get one pencil and one eraser, the worst case is Rohan will get all pens first, then all pencils, then at last one eraser.
The number of attempts will be 12 +13 +1 = 26

Sol.67 (b)
For any three-digit number represented as abc.
- The possible permutations of these digits are abc, acb, bac, bca, cab, and cba.
- We can express each permutation as a(100) + b(10) + c(1), where each digit is multiplied by its place value.
- adding all such combinations and Simplifying, we get S= 2 x [(100a + 10a + a) + (100b + 10b + b) + (100c + 10c + c)].
- Combining like terms, we get 2 [111a + 111b + 111c] = 2 x 111(a + b + c).
Now as the digits are consecutive, a, b, and c can assumed to be x, x+1, x+2.
So the sum will be 2 x 111 x (x + x+1 + x+2) = 2 x 111 x (3x+3)
S = 2 x 111 x 3 x (x +1) = 2 x 37 x 3 x 3 x (x +1)
So, S = 18 x 37 x (x + 1)
S is always divisible by 18 but not by 12 always.
Hence, only b is the correct answer.

Sol.68 (b)
7^16= 49^8 > 16^7
Then, 16^7= 2^28 < 2^32
8^11 = 2^(3x11) = 2^33 > 2^28
So the smallest number among the following is 16^7.

Sol.69 (d)
12 = 4 x3
Now as 4 +8 + 6 + 4 =22 not divisible by 3 so this number is not divisible by 3
=> 9A2 is divisible by 3
=> 9 + A + 2 = 11 + A is divisible by 3.
Only option possible for A is d) i,e 7.

Sol.70 (a)
Statement 1 is correct: Since the passage is talking about the removal of inequalities, we are assuming that equalities are prerequisites for people to participate in social transactions and interactions with confidence.
Statement 2 is Correct: Since the passage talks about the violation of democratic norms when inequality is present, it is being assumed that the occurrence of inequality can threaten the survival of democracy itself and therefore we should strive to remove it.
Statement 3 is incorrect: This is counterintuitive to the theme of the discussion of the passage. Also, the effort of the passage is the removal of inequalities.
Statement 4 is incorrect: This statement is more like a recommendation for the future and cannot be an assumption. Hence, Option (a) is correct

Sol.71 (b)

Option a is incorrect- The passage emphasizes the coexistence and fusion of tradition and modernity rather than advocating for the complete dismissal of traditional values.

Option b is correct - The passage highlights the delicate balance and potential synergy between tradition and modernity, suggesting that they can coexist and complement each other, leading to cultural evolution.

Option c is incorrect -While the passage acknowledges tensions between tradition and modernity, it does not suggest that modernity always trumps tradition.

Option d is incorrect - The passage emphasizes the importance of balancing tradition with modern innovations, indicating that the past holds relevance in shaping the future.

Sol.72 (c)

Straight word I N T E R C H A N G E A B L E N E S S

Reverse word: S S N E L E B A G N R A H C R E T N I

Now we can easily compare the positions of each letter. From this comparison, we can see that only the letters "A" and "E" remain unchanged in their positions.

Therefore, the correct answer is (c) Two.

Sol.73 (b)

Each statement alone is sufficient to answer the question. Given number (P) is 2 digit number.

So, 0<P<100 So, Question is whether P<40

1. let P = xy

⇒ y = x + 6 y can maximum be 9, in which case x would be 3 (P = 39 max)

so P < 40 – Yes, sufficient.

2. let P = xy

⇒ 10x + y = 4y – 4

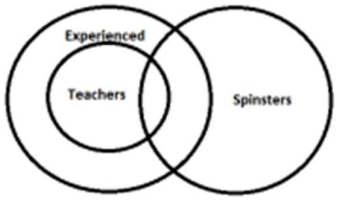
⇒ 10x = 3y – 4

(x,y) = (2,8) is the only valid solution

so N < 40 – Yes, sufficient

Sol.74 (c)

A possible Venn diagram (based on the statement) is shown below:



Conclusions I: Some experienced are spinsters →True (as shown in the Venn diagram)

Conclusions II: Some spinsters are experienced → True (as shown in the Venn diagram)

Thus, both conclusions I and II are true.

Hence, option (c) is correct.

Sol.75 (d)

Let the speed of man in still water be x and the speed of current be y. Let the total distance be D.

So, Downstream speed = x + y And Upstream speed = x – y

According to the question, Time taken in rowing upstream = 5 × Time taken in rowing downstream

$D/(x - y) = 5 \times [D/(x + y)]$
$x + y = 5x - 5y$
$4x = 6y$
$\Rightarrow 2x = 3y$
$x : y = 3 : 2$
Hence, option (d) the correct answer.

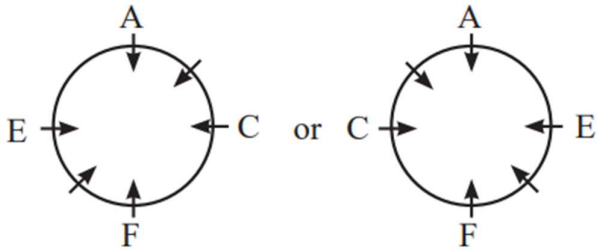
Sol.76 (d)
In the given series A, Z, Z, B, B, B, Y, Y, Y, Y, C, C, C, C, C..., the pattern is as follows:
- The first letter 'A' appears once.
- The second letter 'Z' appears twice.
- The third letter 'B' appears three times.
- The fourth letter 'Y' appears four times.
- The fifth letter 'C' appears five times.

Total number of letters till 13th letter appears 13 times = 13 x 14 /2 =91 Now then 14 letter appears 9th time that is the 100th letter.
14th letter is 7th letter from end = T
So the correct answer is T.

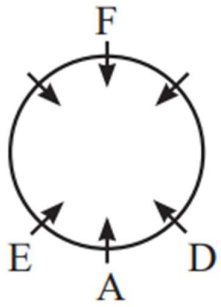
Sol.77 (b)
X can complete 30% of work in 6 days. He will finish 10 % of work in 2 days. So, he will complete 100% work in 20 days.
Similarly, Y can complete 40% of work in 12 days. He will finish 10 % of work in 3 days So, he will complete 100% work in 30 days.
Now, if the work together, In 1 day the amount of work they will complete = 1/20 + 1/30 = (3 + 2)/60= 5/60 = 1/12
So, they need 12 days to complete the whole work. Hence, so the time needed to complete 75% of the work = 75% of 12 = 9 days
Hence option (b) is the correct answer.

Sol.78 (b)
Suppose the total marks is 100.
Full Viva marks then become 20. And full written marks = 80
Marks scored in written = 30% = 30/100 x 80 = 24
As 33% total marks needed, so marks needed in viva is 33-24 = 9
% marks in viva = 9 /20 x 100 = 45 %

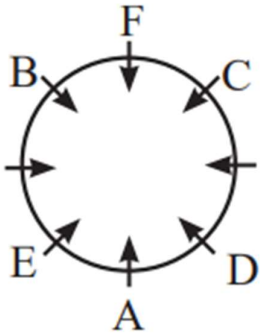
Sol.79 (c)
From Statement I,



From Statement II,



Now, from Statements I and II,



Clearly, C sits to the immediate left of F. Hence, data in both the statements are required to answer the questions

Sol.80 (b)
XYZ is a three-digit number.
So, we can write this as: 100X + 10Y + Z (as X is at hundreds place and Y is at tens place)
So, XYZ + YZX + ZXY = (100X + 10Y + Z) + (100Y + 10Z + X) + (100Z + 10X + Y)
= 111 (X + Y + Z)
Hence, it is divisible by (X + Y + Z).
Also, 111 is divisible by 3, as well as 37.
So, the expression XYZ + YZX + ZXY is not divisible by 9.