

SSC GD CONSTABLE 2025 ANSWER'S EXPLANATION

1.ANSWER

Explanation

Step-by-step solution

- Smallest present is 1
- Next is 2
- Then 4
- Then 5
- Then 6
- Then 7
- Then 8
- Largest is 9

So the sorted sequence is: 1, 2, 4, 5, 6, 7, 8, 9

3. Count to the 4th digit from the left

Positions:

- 1st → 1
- 2nd → 2
- 3rd → 4

- 4th $\rightarrow$ 5

- 5th $\rightarrow$ 6

- 6th $\rightarrow$ 7

- 7th $\rightarrow$ 8

- 8th $\rightarrow$ 9

4. Answer

The 4th digit from the left is 5 $\rightarrow$ option (a).

✓ Final Answer: The 4th digit from the left is 5.

2. ANSWER-A

EXPLANATION

Let's decode it piece by piece.

Given codes

- $A + B \rightarrow$ A is mother of B ($A_{\text{♀}}$, parent of B)

- $A - B \rightarrow A$ is sister of B
- $A \times B \rightarrow A$ is father of B ($A \text{♂}$, parent of B)
- $A \div B \rightarrow A$ is brother of B

Expression: $A+B \times C \div D - E$

Read each adjacent pair with its operator (left $\rightarrow$ right):

1. $A + B$: A is the mother of B .

$\Rightarrow A (\text{♀}) \rightarrow \text{parent of } B$.

2. $B \times C$: B is the father of C .

$\Rightarrow B (\text{♂}) \rightarrow \text{parent of } C$.

From (1) & (2): A is the mother of B , and B is the father of C .

$\rightarrow$ Therefore, A is the paternal grandmother of C (father's mother).

3. $C \div D$: C is the brother of D ($C \text{♂}$).

4. $D - E$: D is the sister of E ($D \text{♀}$).

Notes: Steps (3) and (4) involve C, D, E among themselves and don't change A's relationship to C already established in steps (1)–(2).

Answer: A is the grandmother of C (specifically, paternal grandmother).

3. ANSWER:D

EXPLANATION

This question is about finding the number code assigned to the letter 'T' using the given coding examples:

- STAY → 3845
- LAYS → 3578

Step 1: Identify common letters and digits

- Common letters in both words = S, A, Y
- Common digits in both codes = 3, 5, 8

This means S, A, and Y are represented by 3, 5, and 8 (in some order).

Step 2: Focus on unique letters and digits

- In STAY, the unique letter is T.

In its code 3845, the unique digit (not shared with LAYS) is 4.

So, $T = 4$.

Similarly:

- In LAYS, the unique letter is L.

The unique digit in its code 3578 is 7.

Step 3: Conclusion

- The digit for T is 4.

Final Answer: d. 4

4. ANSWER C

EXPLANATION

Given (all face the centre $\Rightarrow$ Left = anticlockwise, Right = clockwise):

- O is immediate left of M and immediate right of Q $\rightarrow$ in clockwise order:

$Q \rightarrow O \rightarrow M$.

- L is immediate left of Q and immediate right of P $\rightarrow$ in clockwise order:

$P \rightarrow L \rightarrow Q$.

- R is immediate right of M and immediate left of N $\rightarrow$ in clockwise order:

$M \rightarrow R \rightarrow N$.

Chain them together in clockwise order:

1. From the first two clues: $P \rightarrow L \rightarrow Q \rightarrow O \rightarrow M$.

2. Append the third clue after M: $\dots M \rightarrow R \rightarrow N$.

So the full clockwise seating is:

$P \rightarrow L \rightarrow Q \rightarrow O \rightarrow M \rightarrow R \rightarrow N \rightarrow$ (back to P).

Question: Who sits to the immediate right of N?

- Immediate right = next clockwise seat.
- After N (clockwise) comes P.

Therefore, P is to the immediate right of N. ✓

5. ANSWER A

EXPLANATION

1. In both views, the top face is Z.
2. View 1 shows faces meeting at a corner: Z–B–N → so B and N are adjacent to Z.
3. View 2 shows faces meeting at a corner: Z–K–C → so K and C are also adjacent to Z.
4. A face on a cube has four adjacent faces and one opposite face.

From the two views, the four faces adjacent to Z are B, N, K, C.
5. The only remaining letter is A; therefore A is opposite to Z.
6. Opposites are symmetric, so the face opposite to A is Z.

Hence, Z is opposite to A. ✓

6. ANSWER D

EXPLANATION

To solve this problem, we need to identify which option contains the given figure (X) as an exact part, without rotation.

Thus, the correct answer is option 4.

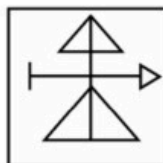
Let's examine figure X first:



Now, we'll compare this figure with each of the provided options to check where the figure is present without any rotation:

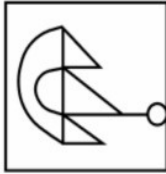


1. On careful inspection, this option does not contain figure X as it is.



2. This option also does not contain figure X.





4. This option contains figure X as an exact embedded part without any rotation.
Therefore, this is the correct answer.

7. ANSWER C

EXPLANATION

1. Write the two statements with their codes

○ “sun is hot” → {la, ah, ft}

○ “moon is beautiful” → {la, ik, zy}

2. Use the key rule of this type of coding

Each word maps to exactly one code (one-to-one).

Therefore, the common word across two sentences must share the common code across their code sets.

3. Find the common word

The only word that appears in both sentences is “is.”

4. Find the common code

The only code that appears in both code sets is **la**.

5. Map them

Hence, “is” ↔ **la**.

6. Eliminate other options

- **ft**, **ah** appear only with the first sentence, so they must be for “sun” or “hot”.
- **ik**, **zy** appear only with the second sentence, so they must be for “moon” or “beautiful”.

Therefore, “is” is coded as **la**.

8 ANSWER D

EXPLANATION

The dice has faces: C, L, O, U, R, F.

Two views are given:

1. Top = C, Left = F, Right = R
2. Top = U, Left = O, Right = R

The common face in both views is R (on the right).

From these two views, R is adjacent to C, F, U, and O (the four faces seen next to it across the two positions).

On a cube, each face has four adjacent faces and one opposite face.

Since R is already adjacent to C, F, U, and O, the only remaining face is L, which therefore must be opposite to R.

Hence, the face opposite to L is R.

9 ANSWER C

EXPLANATION

Step 1: Calculate the differences between consecutive terms

- $64 - 17 = 47$
- $103 - 64 = 39$
- $134 - 103 = 31$
- $157 - 134 = 23$

So, the sequence of first differences is:

47, 39, 31, 23

Step 2: Analyze the pattern in the differences

Now, calculate the differences between these first differences

(second-order differences):

- $39 - 47 = -8$
- $31 - 39 = -8$
- $23 - 31 = -8$

We observe that the second-order difference is constant (-8).

Step 3: Extend the pattern

The last difference was 23.

Adding -8 gives the next difference:

$$23 + (-8) = 15$$

Step 4: Find the missing term

Now, add this difference to the last known term in the series:

$$157 + 15 = 172$$

Final Answer

The missing term in the series is: ☒ 172

10. ANSWER B

EXPLANATION

1. Find the rule from the example:

RC 66 $\rightarrow$ SD 67

- Letters: R $\rightarrow$ S (next letter), C $\rightarrow$ D (next letter)
- Number: 66 $\rightarrow$ 67 (add 1)

2. Verify the rule with the second example:

NV 3 $\rightarrow$ OW 4

- Letters: N $\rightarrow$ O (next), V $\rightarrow$ W (next)
- Number: 3 $\rightarrow$ 4 (add 1)

✓ Same rule holds.

3. Apply the rule to CH 9:

- Letters: C $\rightarrow$ D, H $\rightarrow$ I
- Number: 9 $\rightarrow$ 10

So CH 9 becomes DI 10 $\rightarrow$ option (c).

11. ANSWER C

EXPLANATION

Given pairs

- RC 66 → SD 67
- NV 3 → OW 4

Step 1: Convert letters to positions (A=1, B=2, ..., Z=26)

- R(18) → S(19): +1
- C(3) → D(4): +1
- 66 → 67: +1
- N(14) → O(15): +1
- V(22) → W(23): +1
- 3 → 4: +1

Pattern found: For each pair, both letters move one step forward in the alphabet, and the number increases by 1.

Step 2: Apply the same rule to CH 9

- $C(3) \rightarrow D(4)$ (move +1)
- $H(8) \rightarrow I(9)$ (move +1)
- $9 \rightarrow 10$ (+1)

So CH $9 \rightarrow$ DI 10.

Step 3: Check options

- a. DI 8 ✗ (number decreased)
- b. FI 10 ✗ ($C \rightarrow F$ is +3, not +1)
- c. DI 10 ✓ (matches exactly)
- d. BI 10 ✗ ($C \rightarrow B$ is -1, not +1)

Answer: c. DI 10 ✓

12. ANSWER B

EXPLANATION

1. Translate the statements into set language

- T = tabs, M = medicines, O = ointments, B = branches

S1: *Some tabs are medicines* $\rightarrow T \cap M \neq \emptyset \quad T \cap M \neq \emptyset$

$\neg \text{nothing } T \cap M = \emptyset$

- S2: *Some tabs are ointments* $\rightarrow T \cap O \neq \emptyset \quad T \cap O \neq \emptyset$

$\neg \text{nothing } T \cap O = \emptyset$

- S3: *Some medicines are branches* $\rightarrow M \cap B \neq \emptyset \quad M \cap B \neq \emptyset$

$\neg \text{nothing } M \cap B = \emptyset$

2. Test Conclusion (I): "Some tabs are branches" ($T \cap B \neq \emptyset \quad T \cap B \neq \emptyset$)

$\neg \text{nothing } T \cap B = \emptyset$)

The only link from T to B is via M, but S1 says only some T are M and

S3 says only some M are B. These "some" portions need not be the

same elements. So it's possible that the medicines which are branches

are not the tabs that are medicines. Hence (I) is not forced.

3. Test Conclusion (II): “Some medicines are ointments” ($M \cap O \neq \emptyset$ $M \cap O$

$\neq \varnothing$ $M \cap O = \emptyset$)

S1 and S2 tell us some T are M and some T are O, but they could be different parts of T. Without “all” anywhere, nothing forces an overlap between M and O. Hence (II) is not forced.

4. Concrete counterexample (shows both conclusions can fail while all statements are true)

- Let tabs $T = \{t_1, t_2\}$ $T = \{t_1, t_2\}$ $T = \{t_1, t_2\}$
- Let medicines $M = \{t_1, m_1, b_1\}$ $M = \{t_1, m_1, b_1\}$ $M = \{t_1, m_1, b_1\}$ (so $t_1 \in T \cap M$ $t_1 \in T \cap M$ $t_1 \in T \cap M$)
- Let ointments $O = \{t_2, o_1\}$ $O = \{t_2, o_1\}$ $O = \{t_2, o_1\}$ (so $t_2 \in T \cap O$ $t_2 \in T \cap O$ $t_2 \in T \cap O$)
- Let branches $B = \{b_1\}$ $B = \{b_1\}$ $B = \{b_1\}$ (so $b_1 \in M \cap B$ $b_1 \in M \cap B$ $b_1 \in M \cap B$)

5. Here:

- $T \cap M = \{t_1\} \cap M = \{t_1\}$ ✓
- $T \cap O = \{t_2\} \cap O = \{t_2\}$ ✓
- $M \cap B = \{b_1\} \cap B = \{b_1\}$ ✓

But:

- $T \cap B = \emptyset \cap B = \emptyset \rightarrow (I) \text{ false}$
- $M \cap O = \emptyset \cap O = \emptyset \rightarrow (II) \text{ false}$

Since a situation exists where all statements are true but both conclusions are false, neither (I) nor (II) logically follows.

13. ANSWER A

EXPLANATION

1. Write the series

BDF, HJL, NPR, ?, ZBD

2. Look inside each block (3 letters each).

Each block has letters spaced by +2 in the alphabet:

- $B(2) \rightarrow D(4) \rightarrow F(6) : +2, +2$

- $H(8) \rightarrow J(10) \rightarrow L(12) : +2, +2$
- $N(14) \rightarrow P(16) \rightarrow R(18) : +2, +2$
- $Z(26) \rightarrow B(2) \rightarrow D(4) : +2, +2$ (note the wrap after Z)

3. Now check how blocks shift from one to the next.

Compare the first letters of each block:

- $B(2) \rightarrow H(8) \rightarrow N(14) \rightarrow ? \rightarrow Z(26)$

The jump is +6 each time ($2 \rightarrow 8 \rightarrow 14 \rightarrow 20 \rightarrow 26$).

So the first letter of the missing block is T(20).

4. Fill the rest of the missing block using the +2 rule within a block.

Starting from T(20) and adding +2 twice:

- $T(20) \rightarrow V(22) \rightarrow X(24)$

5. Quick check with the next block.

From X(24), adding +2 gives Z(26), then +2 wraps to B(2), then +2 to

D(4), which matches ZBD.

Therefore, the missing term is TVX

14 ANSWER C

EXPLANATION

Step-by-Step Analysis

1. The first figure contains a vertical sequence of 'S' symbols.
2. The second figure contains a vertical sequence of 'X' symbols.
3. The third figure contains a vertical sequence of semi-circles (arcs).
4. The fourth figure contains a vertical sequence of '%' symbols.

Identifying the Pattern

- Each figure in the series uses a different symbol, aligned vertically in a column.
- The sequence changes the type of symbol in every step.
- To continue the series logically, the next figure must also contain a new type of symbol arranged vertically.

Correct Option

Among the given options, the figure with vertical '#' symbols completes the sequence, because it introduces a new distinct symbol while maintaining the same vertical alignment style.

Conclusion

The correct figure to complete the series is the one with vertical '#' symbols.

✓ Final Answer: The option with vertical '#' symbols logically continues the sequence.

15 ANSWER C

EXPLANATION

1. Fix a reference.

Seat everyone facing the centre. Let clockwise = right. Place K

anywhere (say, at the top).

2. Use “K sits second to the right of L.”

If K is second to L’s right, then L is second to K’s left.

→ Put L two seats counter-clockwise from K.

3. Use “N sits third to the left of K.”

Third to the left in a 6-seat circle is exactly opposite.

→ Put N directly opposite K.

4. Use “P is not an immediate neighbour of K.”

The two seats next to K (immediate left and right) are blocked for P.

With L and N already placed, the only remaining non-neighbour seat is two to K’s right.

→ Put P there.

5. Use “O sits second to the left of M.”

The two empty seats are the immediate left and immediate right of K.

Try M at K’s right → second to M’s left lands on K’s left, so O goes at K’s left.

(If M were at K’s left, O would land on N’s seat—impossible.)

Thus O ends up immediately to the left of K.

16. ANSWER B

EXPLANATION

1. Write the original word with positions (1-based):

1:N, 2:O, 3:T, 4:A, 5:B, 6:L, 7:E

2. Arrange the letters of "NOTABLE" in alphabetical order:

A, B, E, L, N, O, T

With positions:

1:A, 2:B, 3:E, 4:L, 5:N, 6:O, 7:T

3. Compare position by position with the original:

- Pos1: N $\neq$ A
- Pos2: O $\neq$ B
- Pos3: T $\neq$ E
- Pos4: A $\neq$ L
- Pos5: B $\neq$ N

○ Pos6: L ≠ O

○ Pos7: E ≠ T

4. Countunchanged positions: none.

So, 0 letters remain in the same position after alphabetic rearrangement.

17. ANSWER B

EXPLANATION

1. Write letter positions (A=1, B=2, ... , Z=26).

○ CBGD → C(3) B(2) G(7) D(4)

○ HGLI → H(8) G(7) L(12) I(9)

2. Find the shift used.

Compare each position:

3→8, 2→7, 7→12, 4→9 → all are +5.

Check the second pair to confirm:

○ UFLO → U(21) F(6) L(12) O(15)

- ZKQT → Z(26) K(11) Q(17) T(20) → again +5 each.

3. Rule: Every letter is shifted +5 forward in the alphabet (wrapping after Z).

4. Apply the rule to VJRM.

- V(22) +5 = 27 → wrap to A(1)

- J(10) +5 = O(15)

- R(18) +5 = W(23)

- M(13) +5 = R(18)

5. So, VJRM → AOWR

Therefore, the correct option is b. AOWR

18. ANSWER D

EXPLANATION

Step-by-step

1. List the numbers and find the gaps:

○ $791 - 781 = +10$

○ $800 - 791 = +9$

○ $808 - 800 = +8$

○ $815 - 808 = +7$

2. The pattern is adding decreasing increments: +10, +9, +8, +7, ...

So the next increment should be +6.

3. Add to the last term:

○ $815 + 6 = 821$

Hence, the missing number is 821.

19. ANSWER C

EXPLANATION

1. Identify each class:

- Cat – an animal.

- Pant–aclothingitem.
- Ice–aphysicalformofwater.

2. Checkforanyoverlapbetweenmeanings:

- *Acatisnotakindofpantorice.*
- *Apantisnotakindofcatorice.*
- *Iceisnotakindofcatorpant.*

3. There'snosubsetorintersectionamongthese three sets.

4. ChoosetheVenndiagramthatshowsthreedisjoint sets.

- (a)showsoverlapsamongallthree→incorrect.
- (b)showsonesetinsideanother(subset) → incorrect.
- (c)showsthreeseparate,non-overlapping circles → correct.
- (d)showstwooverlappingandoneseperate → incorrect.

Therefore, the diagram that best represents the relationship among Cat, Pant,

Ice is option (c).

20. ANSWER B

EXPLANATION

Write the given series with blanks labeled:

MIKM_LNPS_QSVR_VYU_

→ blanks = A_1, A_2, A_3, A_4, A_5 .

1. Look at the visible jumps between known letters.

○ $M \rightarrow I \rightarrow K \rightarrow M$ gives $-4, +2, +2$

○ $L \rightarrow N \rightarrow P \rightarrow S$ gives $+2, +2, +3$

○ $Q \rightarrow S \rightarrow V \rightarrow R$ gives $+2, +3, -4$

○ $V \rightarrow Y \rightarrow U$ gives $+3, -4$

2. These reveal a repeating cycle of gaps: $-4, +2, +2, +3$ (then repeat).

3. Fill each blank to respect the cycle.

Before M the next gap is $+3$ (since $M \rightarrow I$ is the start -4).

So $A_1 = M - 3 = J$.

- After **M** (in ... **K**, **M**, A_2 , **L** ...) the cycle requires +3 from

M.

$$A_2 = M + 3 = P.$$

- After **S**, the next gap is -4.

$$A_3 = S - 4 = O.$$

- After **R**, the next gap is +2.

$$A_4 = R + 2 = T.$$

- After **U**, the next gap is +2.

$$A_5 = U + 2 = W.$$

So the five letters are J P O T W, i.e., JPOTW → option (b).

21. ANSWER A

EXPLANATION

What “literacy rate” means (Census 2011)

- Effective literacy rate = % of people aged 7+ who can read & write with understanding in any language.
- India (overall, 2011): 74.04% (Male 82.14%, Female 65.46%).

Kerala at a glance (Census 2011)

- Highest state literacy rate: $\approx 93.9\%$
 - Male: $\sim 96.1\%$
 - Female: $\sim 92.1\%$
- 2001 $\rightarrow$ 2011 improvement: $\sim 90.9\% \rightarrow \sim 93.9\%$ (about +3 percentage points).
- Known for near-universal primary enrolment, strong public schooling, adult literacy campaigns (e.g., Kerala State Literacy Mission), and high female literacy—hence the narrow gender gap (~ 4 pp vs India's ~ 17 pp).

How the options compare (Census 2011, states)

- Kerala: $\sim 93.9\%$  (highest)

- Himachal Pradesh: ~82.8%
- Tamil Nadu: ~80.1%
- Manipur: ~76–77%

Quick context

- Among Union Territories, some (e.g., Lakshadweep, Delhi, Chandigarh)

also show very high literacy, but the question asks by state, where

Kerala leads.

- Later surveys (NFHS/PLFS) show changes, but exam questions referencing Census 2011 expect Kerala.

Bottom line: For Census 2011, Kerala has the highest literacy rate

among Indian states—hence option (a).

22. ANSWER C

EXPLANATION

- The All India Trade Union Congress (AITUC) is India's oldest national trade-union federation
- It was founded at Bombay (now Mumbai) on 31 Oct–1 Nov, 1920 amid the post-World War I labour upsurge.
- Lala Lajpat Rai presided over the founding session, and leaders such as N. M. Joshi were key organisers.

Eliminating other options

- 1905 – far too early; India had not yet formed a national federation (early unions were local/sectoral).
- 1919 – labour mobilisation was rising, but the all-India federation took shape the next year.
- 1935 – long after AITUC had already been active (by then, new centrales were emerging).

Hence, the correct year is 1920.

23. ANSWER D

EXPLANATION

1. Know the Gupta “imperial” title

- The Guptas popularized the grand royal style *Maharajadhiraja* (“King of Great Kings”). From Chandragupta I onward this title signaled imperial/paramount status

2. See what the Maukharis called themselves at first

- Early Maukhari rulers are recorded as *Maharaja* (a lower style compared to *Maharajadhiraja*).

3. What changed—and who changed it

- With rising power in the mid-6th century CE, Ishanavarman became the first Maukhari to adopt the Gupta-like imperial title *Maharajadhiraja*.

4. Imitation beyond titles

- Under Ishanavarman, Maukhari coin designs also resembled Gupta coins, reinforcing the imitation of Gupta imperial models.

5. Eliminate the other options

- Rajadhiraja: used by various dynasties (famously later by Cholas), not the hallmark Gupta style in question.
- Samanta: means a feudatory/subordinate—opposite of an imperial title.
- Maharaja: the Maukharis already used this earlier; the upgrade imitating the Guptas was Maharajadhiraja.

Therefore, to emulate the earlier Guptas' imperial idiom, the Maukharis adopted the title *Maharajadhiraja*.

24. ANSWER B

EXPLANATION

1. What the question asks

It's about the inaugural Women's Premier League (WPL) in 2023—how many teams took part.

2. Primary proof (BCCI announcement)

On Jan 25, 2023, the BCCI officially announced the successful bidders for *five* WPL franchises (Adani Sportsline–Ahmedabad, Indiawin Sports–Mumbai, Royal Challengers Sports–Bengaluru, JSW-GMR–Delhi, Capri Global–Lucknow). Five franchises awarded ⇒ five teams.

3. Tournament page confirms participants = 5

The 2023 WPL tournament record shows Participants: 5 and lists the teams: Delhi Capitals, Gujarat Giants, Mumbai Indians, Royal Challengers Bangalore/Bengaluru, UP Warriorz.

4. Independent roster/format references say 5 teams

Pre-season team/squad coverage and format notes also state the league started with five teams.

5.Context (not required to answer, but helpful)

The first season ran 4–26 March 2023 with 22 matches in a double

round-robin + playoffs format; Mumbai Indians won the title. All of this aligns with a five-team league structure.

Therefore, the first WPL (2023) had *five* teams → option (b).

25. ANSWER B

EXPLANATION

Clarify what “first Paralympic Games” means

The exam is asking for the first event officially recognized as the Paralympic Games (not just any earlier disability-sport meet). That first official, multi-sport Paralympics took place in 1960, hosted by the Olympic city of Rome.

Why Rome (1960) and not London (1948)?

In 1948, Sir Ludwig Guttmann began the Stoke Mandeville Games in England—these are the forerunner of the Paralympics, not yet called the Paralympic Games. The movement evolved over the 1950s and then, in 1960, the Games moved to Rome and were later recognized as the first Paralympic Games.

Official IPC confirmation

The International Paralympic Committee (IPC) explicitly states that Rome 1960 was the first ever Paralympic Games; medals from that event even bore the then-official name “Stoke Mandeville International Games 1960,” showing the transition from the precursor to the formal Paralympics.

Basic facts that help you remember

- Host city & dates: Rome, 18–25 September 1960.
- Programme: Eight sports for wheelchair athletes (the movement broadened in later years).

Eliminate the other options

- London: birthplace of the Stoke Mandeville Games (1948), but not the first Paralympics.
- Paris: hosted the Paralympics much later (2024).
- Rio de Janeiro: hosted in 2016—also much later.

Therefore, the first Paralympic Games took place in *Rome* (1960).

26. ANSWER C

EXPLANATION

1. What the phrase means

“Sale of government assets” = the government reduces or entirely sells its ownership stake in a public asset or Public Sector Undertaking (PSU) to private buyers or the public.

2. Term for that action

This is called disinvestment (also written “dis-investment”). When the sale is 100% and control passes to private hands, it’s often termed privatisation; but the broader, standard term in policy and exams for selling government holdings is disinvestment.

3. Eliminate the wrong options

- (a) Investment: the purchase of assets (opposite action).

- (b) Commercialisation: making a public entity operate on commercial principles (pricing for profit, efficiency), without necessarily selling ownership.
- (d) Capitalisation: arranging/structuring capital or financing (e.g., issuing shares/debt), not specifically the sale of government assets.

Therefore, the sale of government assets is disinvestment.

27. ANSWER A

EXPLANATION

1. Identify the award & category

The question asks the year Puru Dadheech (Kathak dancer-guru from Ujjain) received the Sangeet Natak Akademi Award specifically for Overall Contribution to the Performing Arts.

2. Check the official selection year

The Press Information Bureau (Government of India) announced that Puru Dadhich (alternate spelling) was selected for the Sangeet Natak Akademi Award 2018 in the field of Overall Contribution/Scholarship in the Performing Arts.

3. Cross-verify with official lists

The Akademi's published lists for the 2018 awards show "Puru Dadheech – Overall Contribution" under Overall Contribution/Scholarship in Performing Arts.

4. Note on ceremony vs. award year (why some sources mention later dates)

Sometimes presentations happen later (e.g., ceremonies held after delays), but the award year remains 2018, which is what exams test.

His bio entries also record SNA Award: 2018.

Eliminate the other options

- 2000 / 2004 / 2015: None match the official declaration for his Overall Contribution SNA Award, which is 2018.

Therefore, the correct year is 2018.

28. ANSWER D

EXPLANATION

1. What “Green Revolution” means (in India)

It refers to the *new agricultural strategy* launched in the mid-1960s—package of HYV (high-yielding) seeds, chemical fertilizers & pesticides, assured irrigation, institutional credit, and price support/procurement—initially focused on wheat and rice in Punjab, Haryana, and western UP.

2. The start year

India adopted the new strategy in 1966. That’s when large-scale import and multiplication of Mexican semi-dwarf wheat began, field demonstrations scaled up, and policy support

(inputs/credit/procurement) was rolled out. The first big output jump

followed in 1967–68, but the launch is taken as 1966.

3. Why the other years are wrong

- 1950: Early Community Development & Grow-More-Food efforts—*pre-Green-Revolution* era; no HYV-based package.
- 1960: IADP/IAAP pilots start around this time, but the HYV-led Green Revolution wasn't launched yet.
- 1975: By then the first phase had already transformed wheat production; too late to be the “beginning.”

Therefore, the Green Revolution in India began in 1966

29. ANSWER B

EXPLANATION

Why Kathak is the northern dance form

- Origin & region: Kathak developed in North India, especially around Uttar Pradesh and the courts/temples of North Indian cultural centers.
- Gharanas (schools): Famous northern gharanas include Lucknow, Jaipur, and Banaras, all firmly in the Hindi belt.
- Style features: Fast, intricate tatkār (footwork), chakkars (spins), expressive abhinaya, and storytelling roots from temple kathā (storytelling) traditions; performed to Hindustani music.

Eliminating the other options (all from the South)

- Kathakali – from Kerala (South India); elaborate facial makeup, masks, and vigorous dance-drama tradition.
- Mohiniyattam – from Kerala (South India); graceful, lasya-dominant solo form.
- Kuchipudi – from Andhra Pradesh (South India); dance-drama with strong Carnatic music base.

Quick memory tip

- Kathak = North (think *Katha* storytellers of the North).
- The other three—Kathakali, Mohiniyattam (Kerala), Kuchipudi (AP)—are all South Indian forms.

Hence, the classical dance from Northern India is Kathak (option b).

30. ANSWER A

EXPLANATION

Which radiation is “harmful”?

Mainly the Sun’s ultraviolet (UV), especially UV-B (280–315 nm) and UV-C (<280 nm), which can damage DNA and living tissues.

Where is the protective shield?

The Earth’s ozone layer sits in the stratosphere, roughly 15–35 km above the surface (strongest around 20–30 km). Ozone (O₃) there:

- Absorbs virtually all UV-C
- Absorbs most UV-B

- Lets most UV-A (315–400 nm) through (far less harmful)

How it works (in brief):

Sunlight splits $O_2 \rightarrow O$ atoms; $O + O_2 \rightarrow O_3$. Ozone then absorbs UV and reverts, maintaining a cycle that soaks up harmful UV before it reaches the ground.

Why the other layers are not the answer

- Troposphere (d): 0–12 km; weather happens here. It doesn't house the protective ozone layer (ground-level ozone here is a pollutant, not our UV shield).
- Mesosphere (b): 50–85 km; where meteors burn. Not the primary UV shield.
- Thermosphere (c): >85 km; absorbs X-rays and extreme UV, but the crucial life-damaging UV-B/UV-C that threatens surface life is primarily blocked in the stratosphere.

- Bottom line: The ozone layer in the stratosphere is the Earth's main UV shield, protecting life from harmful solar radiation.

31. ANSWER C

EXPLANATION

1. Identify the exact report & period

The question cites *National Multidimensional Poverty Index: A Progress Review 2023* (NITI Aayog). It compares NFHS-4 (2015–16) with NFHS-5 (2019–21).

2. Read the headline finding

The official release states: “A record 13.5 crore people moved out of multidimensional poverty between 2015–16 and 2019–21.” That’s 135 million people.

3. Corroborate with details from the report

Over the same period, India’s MPI headcount ratio fell from 24.85% to 14.96%, aligning with the 13.5-crore reduction.

4. Eliminate other options

- 120.5 crore exceeds India's poor by far for that period—impossible.
- 16.5 crore and 15.5 crore do not match the official figure; the report consistently quotes 13.5 crore.

Hence, according to the 2023 National MPI Progress Review, *13.5 crore* people in India escaped multidimensional poverty between 2015–16 and 2019–21.

32. ANSWER D

EXPLANATION

1. Match the dates

- Industrial Policy Resolution (IPR): issued in 1956 to steer India toward a “socialistic pattern of society.”
- Five-Year Plans timeline:

- First Plan: 1951–1956
- Second Plan: 1956–1961 ✓
- Fourth Plan: 1969–1974
- Fifth Plan: 1974–1979

2. Since the IPR was adopted in 1956, its implementation aligns with the start of the Second Five-Year Plan (1956–61).

3. What the 1956 IPR did (in brief)

- Laid out a public-sector–led industrial strategy to build a socialistic framework.
- Divided industries into three schedules:
 - Schedule A: exclusively for the public sector (core/heavy industries).
 - Schedule B: mixed, with the state taking the lead and private sector allowed to operate.
 - Schedule C: open to the private sector, but subject to regulation.

- This dovetailed with the Mahalanobis strategy of the Second Plan, emphasizing heavy industries, capital goods, and long-term growth capacity.

4. Why the other options are wrong

- First Plan (1951–56): ended the same year the IPR was issued; implementation framework belongs to the next plan.
- Fourth (1969–74) and Fifth (1974–79): much later; by then policy emphasis had already been set by the 1956 IPR.

Therefore, the IPR 1956 was implemented during the *Second Five-Year Plan*.

33. ANSWER B

EXPLANATION

1. Identify the event & date

The Civil Registration System (CRS) mobile application for online birth and death registration was launched in late October 2024.

2. Who launched it (therefore, which ministry?)

It was launched by Union Home Minister Amit Shah—so the app rollout falls under the Ministry of Home Affairs (MHA), which oversees the Office of the Registrar General & Census Commissioner of India (the CRS authority).

3. Independent confirmations

Major national outlets reported the same: the CRS mobile app for birth/death registration was launched by the Union Home Minister, reaffirming that it's an MHA initiative.

4. Extra context (helps remember)

The CRS system and the Registrar General/Census come under MHA—not Agriculture, Defence, or Social Justice—so any national CRS app launch would naturally be by Home Affairs.

Hence, the correct ministry is the *Ministry of Home Affairs* (option b).

34. ANSWER B

EXPLANATION

1. What happened on 26 January 1950?

India's Constitution came into effect on 26 January 1950, transforming India from a Dominion to a Sovereign Democratic Republic. To commemorate this, the day is celebrated every year as Republic Day.

2. Why specifically 26 January (and not any other date)?

The Constituent Assembly intentionally chose 26 January to honor the Purna Swaraj (Complete Independence) Declaration adopted by the Indian National Congress on 26 January 1930. Thus, the date links the Constitution to the earlier freedom movement milestone.

3. How Republic Day is observed

- A grand parade in New Delhi showcases India's military strength, cultural diversity, and technological achievements.
- The President (Head of State) takes the salute; gallantry and civilian awards are announced around this time.

4. Eliminate the other options

- Gandhi Jayanti: 2 October (birth anniversary of Mahatma Gandhi).
- Constitution Day (Samvidhan Divas): 26 November (day the Constituent Assembly adopted the Constitution in 1949; it came into force on 26 Jan 1950).
- Independence Day: 15 August (marking the end of British rule in 1947).

Therefore, the national festival on 26 January is *Republic Day*.

35. ANSWER C

EXPLANATION

1. Identify the official schedule:

The Prime Minister's Office announced that after Russia, PM Narendra Modi would travel to Austria on 9–10 July 2024.

2. Confirm with the Ministry of External Affairs:

MEA's press note also states he paid an official visit to Austria from 9–10 July 2024, noting it was the first visit by an Indian PM in 41 years.

3. Cross-check with Austria's government:

Austria's Foreign Ministry records the visit on 9–10 July 2024 in Vienna, coinciding with 75 years of India–Austria diplomatic relations.

4. Therefore, the month = July (2024).

Media recaps and MEA statements on 10–11 July 2024 further corroborate the dates.

Hence, the correct option is *July (c)*.

36. ANSWER A

EXPLANATION

Kepler's Third Law and Orbital Period

The law that connects a planet's orbital period with the radius of its orbit around the Sun is Kepler's Third Law of Planetary Motion.

Kepler's Third Law

Kepler's Third Law establishes a precise relationship between:

- The orbital period of a planet (time taken to complete one orbit, denoted by T), and
- The average orbital radius or semi-major axis of the orbit (denoted by a).

The law states:

$$T^2 \propto a^3$$

Or equivalently:

$$T \propto a^{3/2}$$

Meaning of the Law

- Planets that are farther from the Sun (larger a) take longer periods (TTT) to complete one orbit.
- This principle shows that orbital size directly dictates the time required for one revolution.
- It is a fundamental rule of celestial mechanics, applicable not only to our solar system but also to exoplanets orbiting other stars.

Why Other Laws Are Incorrect

1. Copernicus' Model

- Nicolaus Copernicus proposed the heliocentric model, placing the Sun at the center of the solar system.
- However, he did not formulate mathematical laws of planetary motion. Those were later developed by Johannes Kepler.

2. Drake Equation

- A formula in astrobiology used to estimate the number of intelligent extraterrestrial civilizations in the Milky Way.
- Not related to planetary orbits.

3. Hubble's Law

- States that galaxies are moving away from Earth at speeds proportional to their distance.
- Describes the expansion of the universe, not orbital mechanics.

✓ Conclusion

Only Kepler's Third Law accurately describes the relationship between a planet's orbital period and its orbital radius (semi-major axis).

37. ANSWER C

EXPLANATION

Muthuswami Dikshitar's Musical Association

Muthuswami Dikshitar was a revered figure in Indian classical music, admired for his mastery as a singer, composer, and poet. His legacy remains deeply rooted in the Carnatic music tradition, one of the two principal schools of Indian classical music (the other being Hindustani music).

Dikshitar's Contributions to Carnatic Music

- **Pioneer Composer:** He is regarded as one of the most significant composers in the history of Carnatic music.
- **The Carnatic Trinity:** Alongside Tyagaraja and Syama Sastri, Dikshitar forms the legendary Carnatic Music Trinity, credited with shaping the foundation and repertoire of modern Carnatic music.
- **Rich Compositions (Kritis):** His works, known as *kritis*, are admired for their depth, strict adherence to classical principles, and lyrical beauty.

Many of them weave together devotional themes, detailed descriptions of deities, and profound philosophical ideas.

- Famous Works: Some of his celebrated compositions include:
 - Navagraha Kritis – dedicated to the nine planets.
 - Panchalinga Kritis – dedicated to the five elements of nature.
- Blend of Scholarship and Devotion: His compositions reflect not only his mastery of music theory but also his deep spiritual devotion.

✓ Conclusion

Muthuswami Dikshitar is fundamentally associated with Carnatic music, where his contributions continue to inspire musicians and devotees alike.

38. ANSWER A

1. What the Chief Minister (CM) *does* do (Constitutional duties)

- Heads the Council of Ministers and steers state policy & administration. → So (b) Guides the framing of the policies for the State is true.

- Acts as the link between the Governor and the Council of Ministers:

Under Article 167, the CM must (i) communicate all CoM decisions to the Governor, (ii) furnish information sought by the Governor, and (iii) submit matters for CoM consideration if the Governor so requires. Hence (c) is the sole link between Council of Ministers and Governor is true (the CM is the principal/constitutional channel).

- Advises the Governor:

Under Article 163, the Governor acts on the aid and advice of the Council of Ministers headed by the CM (except in a few discretionary areas). Thus (d) Advises the Governor is true.

2. What the CM does *not* do

- Public Service Commissions (PSCs) are constitutional bodies

under Articles 315–323.

- Each State has its State PSC; two or more States may have a Joint State PSC (created by Parliament on request).

- Coordination of “inter-state” PSCs (Joint State PSCs) is not

a function of a CM; it involves constitutional/legislative

arrangements among States, Governors, and the

Union—not CM-led “coordination” across states.

Therefore, (a) Coordinates the functioning of inter-state

public service commissions is not a function of the CM.

Hence, the option that is NOT a function of a Chief Minister is (a).

39. ANSWER C

EXPLANATION

- A. Bleaching Powder → 3 (Chlorine gas and dry slaked lime)

- Bleaching powder (mainly CaOCl_2) is made by passing Cl_2 over dry slaked lime Ca(OH)_2 .
- Reaction: $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$.
- B. Baking Powder → 4 (Acid–Base reaction)
 - Baking powder is a mixture of a base (baking soda, NaHCO_3) and a weak edible acid (e.g., tartaric acid) plus starch.
 - When moistened/heated, they undergo an acid–base reaction releasing CO_2 for leavening.
- C. Washing Powder → 1 (Heating baking soda and recrystallization of the resultant)
 - “Washing powder” here refers to washing soda ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$).
 - Prepare by heating baking soda: $2 \text{NaHCO}_3 \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$, then recrystallize to get $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$.
- D. Plaster of Paris → 2 (Heating gypsum)
 - Plaster of Paris is $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$, obtained by heating gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) at $\sim 373 \text{ K}$ to drive off $1\frac{1}{2}$ molecules of water.

So the correct mapping is A-3, B-4, C-1, D-2 → option (c).

40. ANSWER A

EXPLANATION

- What was added?

The Fundamental Duties were inserted as Article 51A in Part IV-A of the Constitution.

- How were they added?

Through the 42nd Constitutional Amendment Act, 1976 (often called the “Mini-Constitution”).

- Why 1976?

Following recommendations of the Swaran Singh Committee (1976), Parliament added ten Fundamental Duties for citizens (e.g., respect the Constitution, national flag/anthem, protect environment, etc.).

Later, the 86th Amendment (2002) added an eleventh duty:

parents/guardians must provide opportunities for education to children aged 6–14.

- Eliminate other options

- 1951, 1952, 1958: No amendment introducing Fundamental

Duties occurred in these years; these dates are well before the 42nd Amendment.

Bottom line: Fundamental Duties entered the Constitution in 1976 via the 42nd Amendment.

41. ANSWER A

EXPLANATION

Step 1: Condition analysis

We are told:

$$N \div 9 \Rightarrow \text{remainder } 5$$

$$N \div 18 \Rightarrow \text{remainder } 5$$

$$N \div 23 \Rightarrow \text{remainder } 5$$

This means that if we subtract 5 from the number, the result must be divisible by **9, 18, and 23**.

So:

$$N - 5 \text{ is divisible by } \text{LCM}(9, 18, 23).$$

Step 2: Find the LCM

- $9 = 3^2$
- $18 = 2 \times 3^2$
- $23 = \text{prime number}$

So,

$$\text{LCM}(9, 18, 23) = 2 \times 3^2 \times 23 = 2 \times 9 \times 23 = 414.$$

Thus:

$$N - 5 \equiv 0 \pmod{414}.$$

$$N = 414k + 5.$$

Step 3: Largest 4-digit number form

The largest 4-digit number is 9999.

We need:

$$414k + 5 \leq 9999$$

$$414k \leq 9994$$

$$k \leq \frac{9994}{414}.$$

Do the division:

$$9994 \div 414 \approx 24.13$$

So the maximum integer value of $k = 24$.

Step 4: Calculate N

$$N = 414 \times 24 + 5 = 9936 + 5 = 9941.$$

Final Answer:

The required number is 9941.

Correct Option: a. 9941

42. ANSWER C

EXPLANATION

$$16+8\div 4-3\times 4$$

1) Use the order of operations (BODMAS/PEMDAS)

- B/P: Brackets/Parentheses
- O/E: Orders/Exponents
- DM/MD: Division and Multiplication (left $\rightarrow$ right)
- AS: Addition and Subtraction (left $\rightarrow$ right)

There are no brackets or exponents here, so start with division and multiplication, moving left to right.

2) Do division and multiplication

- $8\div 4=2$
- $3\times 4=12$

Now the expression becomes:

$$16+2-12 \quad 16 + 2 - 12 \quad 16+2-12$$

3) Do addition and subtraction (left $\rightarrow$ right)

- $16+2=18$ $16 + 2 = 18$ $16+2=18$
- $18-12=6$ $18 - 12 = 6$ $18-12=6$

Answer: 6 (option c)

Quick checks (to avoid common mistakes)

- Don't add $16+8$ $16 + 8$ $16+8$ first; division/multiplication come before addition/subtraction.
- You can also view it as $16+(8/4)-(3\times 4)=16+2-12$ $16 + (8/4) - (3\times 4)$
 $= 16 + 2 - 12$ $16+(8/4)-(3\times 4)=16+2-12$.
- Rearranging at the end is fine: $16+2-12=(16-12)+2=4+2=6$ $16 + 2 - 12 =$
 $(16 - 12) + 2 = 4 + 2 = 6$ $16+2-12=(16-12)+2=4+2=6$.

43. ANSWER B

EXPLANATION

We need the biggest number d such that:

- 1938 leaves 0 remainder $\Rightarrow d$ divides 1938
- 2337 leaves 3 remainder $\Rightarrow d$ divides $(2337 - 3) = 2334$

So d must divide both 1938 and 2334. That means $d = \text{GCD}(1938, 2334)$.

Find the GCD quickly by easy factors

- Both are even $\Rightarrow$ common factor 2.
 - $1938 \div 2 = 969$
 - $2334 \div 2 = 1167$
- Check 3 (sum of digits test):
 - $969 \rightarrow 9+6+9 = 24$ (divisible by 3)

○ $1167 \rightarrow 1+1+6+7 = 15$ (divisible by 3)

$\Rightarrow$ another common factor 3.

So GCD has at least $2 \times 3 = 6$.

Check if there's anything bigger (7, 11, 13, ...):

- $969 \div 7 \approx 138.4$ (not whole), $1167 \div 7 \approx 166.7$ (not whole)
- $969 \div 11 \approx 88.1$ (not whole), $1167 \div 11 \approx 106.1$ (not whole)
- $969 \div 13 \approx 74.5$ (not whole), $1167 \div 13 \approx 89.8$ (not whole)

No larger common factor. So GCD = 6.

Quick verification

- $1938 \div 6 = 323$ remainder 0 ✓
- $2337 \div 6 = 389$ remainder 3 (since $6 \times 389 = 2334$) ✓

Therefore, the greatest number is 6.

44. ANSWER A

EXPLANATION

Method 1: Formula (step by step)

Given

- Simple Interest (SI) = ₹714
- Rate $R = 7\%$ per annum
- Time $T = 3$ years
- Principal = P (unknown)

Simple Interest formula:

$$SI = \frac{P \times R \times T}{100} \Rightarrow P = \frac{SI \times 100}{R \times T}$$

Substitute values:

$$P = \frac{714 \times 100}{7 \times 3} = \frac{71400}{21}$$

Divide carefully (long division idea):

- $21 \times 3000 = 63,000$ (left: $71,400 - 63,000 = 8,400$)
 - $21 \times 400 = 8,400$ (left: $8,400 - 8,400 = 0$)
- So, $21 \times 3400 = 71,400$.

$$P = \boxed{3,400}$$

Method 2: "Per-year interest" shortcut

Simple interest means **same interest each year**.

- Interest **per year** = 7% of $P = 0.07P$.
- For **3 years**: total SI = $3 \times 0.07P = 0.21P$.

Given SI = 714:

$$0.21P = 714 \Rightarrow P = \frac{714}{0.21} = \frac{71400}{21} = 3400.$$



Quick verification

- 7% of 3400 $= 0.07 \times 3400 = 238$.
- For 3 years: $238 \times 3 = 714$ ✓ matches given SI.

Eliminate the other options fast

- 3406: $7\% = 238.42$; $\times 3 = 715.26$ ✗
- 3401: $7\% = 238.07$; $\times 3 = 714.21$ ✗
- 3409: $7\% = 238.63$; $\times 3 = 715.89$ ✗

Only 3400 gives exactly ₹714.

Exam tip

When SI, rate, and time are given, you can use the clean shortcut:

$$P = \frac{\text{SI}}{(\text{Rate} \times \text{Time})} \times 100 = \frac{714}{7 \times 3} \times 100 = \frac{714}{21} \times 100 = 34 \times 100 = 3400.$$

45. ANSWER A

EXPLANATION

1. Translate the sentence into an equation

$$\text{"2% of } x = 300" \rightarrow 0.02 \times x = 300.$$

2. Solve for x

$$x = \frac{300}{0.02}$$

Divide carefully: $0.02 = \frac{2}{100}$. So,

$$\frac{300}{0.02} = 300 \times \frac{100}{2} = 300 \times 50 = 15000.$$

3. Quick check

$$2\% \text{ of } 15000 = 0.02 \times 15000 = 300 \quad \checkmark$$

Eliminate other options

- 30000: $2\% = 600$ ✗
- 15100: $2\% = 302$ ✗
- 30100: $2\% = 602$ ✗

$$\text{So, } x = \boxed{15000}.$$

46. ANSWER A

EXPLANATION

1) Recall the definition

The *mean proportional* (geometric mean) between a and b is $\sqrt{ab}$.

2) Translate the statement into an equation

- Mean proportional between 25 and N : $\sqrt{25N}$
- Mean proportional between 15 and 35: $\sqrt{15 \cdot 35}$

Given:

$$\sqrt{25N} = 2 \times \sqrt{15 \cdot 35}.$$

3) Simplify both sides

Right side: $15 \cdot 35 = 525 = 25 \cdot 21$, so

$$\sqrt{525} = \sqrt{25 \cdot 21} = 5\sqrt{21}.$$

Thus,

$$\sqrt{25N} = 2 \cdot 5\sqrt{21} = 10\sqrt{21}.$$

Left side: $\sqrt{25N} = \sqrt{25}\sqrt{N} = 5\sqrt{N}$.

Therefore,

$$5\sqrt{N} = 10\sqrt{21} \Rightarrow \sqrt{N} = 2\sqrt{21}.$$

4) Square both sides to solve for N

$$N = (2\sqrt{21})^2 = 4 \times 21 = \boxed{84}.$$

Quick check (numeric)

Right side target: $2\sqrt{525} \approx 2 \times 22.912 = 45.824$.

Left with $N = 84$: $\sqrt{25N} = \sqrt{2100} = 45.825$ (matches, up to rounding).

Eliminate other options fast

- $N = 80$: $\sqrt{25N} = 5\sqrt{80} \approx 44.72$ ✗
- $N = 72$: ≈ 42.43 ✗
- $N = 76$: ≈ 43.59 ✗

Only 84 satisfies the condition.

47. ANSWER B

EXPLANATION

Step-by-step solution

A proportion has the form

$$\frac{\text{1st}}{\text{2nd}} = \frac{\text{3rd}}{\text{4th}}.$$

Here: 1st = 31, 2nd = 12, 4th = 156. Let the 3rd number be x .

So,

$$\frac{31}{12} = \frac{x}{156}.$$



Use cross-multiplication (product of extremes = product of means):

$$31 \times 156 = 12 \times x \Rightarrow x = \frac{31 \times 156}{12}.$$

Compute carefully:

- First simplify $156 \div 12 = 13$.
- Then $x = 31 \times 13$.
- $31 \times 13 = 31 \times (10 + 3) = 310 + 93 = 403$.

$$x = 403$$

Quick check

$$\frac{31}{12} = \frac{403}{156}$$

because $403 = 31 \times 13$ and $156 = 12 \times 13$; both ratios reduce to $31/12$. ✓

So, the third number is **403**.

48. ANSWER B

Step-by-step explanation

Let:

- ₹A = amount given to Arun (invested for 11 years at 10% p.a.,
compounded annually)
- ₹M = amount given to Mahesh (invested for 12 years at 10% p.a.)

- Total: $A + M = 1218$

Because both end up with the same maturity amount:

$$A(1.10)^{11} = M(1.10)^{12}$$

Divide both sides by $(1.10)^{11}$:

$$A = M \times 1.10 \Rightarrow A = 1.1M$$

Use the total:

$$A + M = 1218 \Rightarrow 1.1M + M = 1218 \Rightarrow 2.1M = 1218$$

$$M = \frac{1218}{2.1} = \frac{12180}{21} = \boxed{580}$$

Quick sanity check

- Then $A = 1.1 \times 580 = 638$.
- Final amounts:
 - Arun: $638 \times (1.1)^{11}$
 - Mahesh: $580 \times (1.1)^{12} = 580 \times 1.1 \times (1.1)^{11} = 638 \times (1.1)^{11}$

○ → **Equal, as required.**

$$\text{Sum: } 580 + 638 = 1218 \quad \checkmark$$

Therefore, Ashish gave Mahesh ₹580.

49. ANSWER A

EXPLANATION

Method 1 — Formula (harmonic mean for equal distances)

When you travel the **same distance** out and back at speeds v_1 and v_2 , the average speed over the round trip is the **harmonic mean**:

$$\text{Average speed} = \frac{2v_1v_2}{v_1 + v_2}.$$

Plug in $v_1 = 78$ and $v_2 = 91$:

$$\text{Avg} = \frac{2 \times 78 \times 91}{78 + 91} = \frac{2 \times 7098}{169} = \frac{14196}{169}.$$

Now divide carefully:

- $169 \times 80 = 13520$ (remainder $14196 - 13520 = 676$)
- $169 \times 4 = 676$

$$\text{So, } \frac{14196}{169} = 80 + 4 = 84.$$

$\Rightarrow$ Average speed = 84 km/h.

Common pitfalls (so you don't slip on these in exams)

- Don't take the **arithmetic mean** $\frac{78+91}{2} = 84.5$. That's **wrong** for equal distances.
- Always use the **harmonic mean** (or total distance / total time) for round trips over the same route.

Final: 84 km/h ✓

50. ANSWER C

EXPLANATION

Method 1 — Weighted average (total marks ÷ total students)

Given

- Boys: 20 students, avg = 75 $\Rightarrow$ total boys' marks = $20 \times 75 = 1500$
- Girls: 30 students, avg = 85 $\Rightarrow$ total girls' marks = $30 \times 85 = 2550$
- Total students = $20 + 30 = 50$

Overall average

$$\frac{1500 + 2550}{50} = \frac{4050}{50} = 81$$

Method 2 — Deviation (quick mental math)

Use 75 as a base (boys' average):

- If **everyone** scored 75, class total = $75 \times 50 = 3750$.
- Each girl actually scores **10 more** than 75 (since $85 - 75 = 10$).

Girls add $30 \times 10 = 300$ extra marks.

Actual total = $3750 + 300 = 4050$.

Average = $4050 \div 50 = 81$.

Method 3 — Alligation check (sanity test)

Let overall average be A . With boys at 75 and girls at 85, and counts **boys:girls** = 20:30 = 2:3, the alligation rule says:

$$\text{boys : girls} = (85 - A) : (A - 75).$$

Try $A = 81$:

$$(85 - 81) : (81 - 75) = 4 : 6 = 2 : 3,$$

which matches the actual ratio 2 : 3. So $A = 81$ is consistent.

Common pitfalls to avoid

- Don't average 75 and 85 directly (that gives 80). You must **weight** by counts (20 vs 30), which pulls the overall average **above 80** to 81.
- Double-check arithmetic: $75 \times 20 = 1500$, $85 \times 30 = 2550$, total = 4050, divide by 50 gives 81.

51. ANSWER D

EXPLANATION

Method 1 — Direct formula (profit over cost)

Given:

- Cost Price (CP) = ₹1,020
- Selling Price (SP) = ₹1,224

Step 1: Profit

$$\text{Profit} = \text{SP} - \text{CP} = 1224 - 1020 = 204$$

Step 2: Profit %

$$\text{Profit \%} = \frac{\text{Profit}}{\text{CP}} \times 100 = \frac{204}{1020} \times 100$$

Step 3: Simplify the fraction carefully

Option A (by common factor 12):

- $204 \div 12 = 17$
- $1020 \div 12 = 85$

$$\text{So } \frac{204}{1020} = \frac{17}{85}.$$

Now, does $\frac{17}{85}$ equal 0.2?

Check: $85 \times 0.2 = 17 \rightarrow \text{yes.}$

Therefore, $\frac{17}{85} = 0.2.$

So,

$$\text{Profit \%} = 0.2 \times 100 = 20\%.$$

(You could also cancel by 102 directly: $204/(1020) = (2 \cdot 102)/(10 \cdot 102) = 2/10 = 0.2.$)

Method 2 — “What % of cost was added?”

Another quick view:

$$10\% \text{ of } ₹1,020 = ₹102 \Rightarrow 20\% = ₹204.$$

Added amount is ₹204, and indeed $1020 + 204 = 1224.$

So the markup is **20%**.

Method 3 — Ratio method (SP/CP)

$$\frac{SP}{CP} = \frac{1224}{1020}$$

Divide top & bottom by 12:

$$\frac{1224}{1020} = \frac{102}{85}$$

Now, $85 \times 1.2 = 102$ exactly $\Rightarrow \frac{102}{85} = 1.2$.

That means $SP = 1.2 \times CP = 20\% \text{ above } CP \Rightarrow \text{Profit\%} = 20\%$.

Common pitfalls to avoid

- Wrong base: Profit% must be on cost, not on SP.
- Averaging errors: Don't average numbers; use the formula.

Final: 20%

52. ANSWER D

EXPLANATION

Step 1: Recall formulas

- Simple Interest (SI):

$$SI = \frac{P \times R \times T}{100}$$

- Compound Interest (CI):

$$CI = P \left(1 + \frac{R}{100} \right)^T - P$$

Here, $T = 2$ years, $SI = ₹42$, $CI = ₹49$.

Step 2: Express SI in terms of P and R

$$SI = \frac{P \times R \times 2}{100} = 42$$

$$\frac{2PR}{100} = 42 \Rightarrow \frac{PR}{50} = 42$$

$$PR = 42 \times 50 = 2100$$

Step 3: Express CI for 2 years

For 2 years:

$$CI = P \left(1 + \frac{R}{100} \right)^2 - P$$

$$CI = P \left(\frac{100 + R}{100} \right)^2 - P$$

$$CI = P \left(\frac{(100 + R)^2 - 100^2}{100^2} \right)$$

$$CI = P \times \frac{R^2 + 200R}{100^2}$$

$$CI = \frac{PR^2}{100^2} + \frac{2PR}{100}$$

Step 4: Substitute values

We know:

- $\frac{2PR}{100} = 42$ (from SI).
- So CI becomes:

$$CI = \frac{PR^2}{100^2} + 42$$

Given CI = 49:

$$49 = \frac{PR^2}{100^2} + 42$$

$$49 - 42 = \frac{PR^2}{100^2}$$

$$7 = \frac{PR^2}{10000}$$

$$PR^2 = 70000$$

Step 5: Use PR = 2100

We have:

$$PR = 2100$$

So,

$$PR^2 = (PR) \times R = 2100 \times R$$

53. ANSWER D

$$2100R = 70000$$

EXPL

$$R = \frac{70000}{2100} = 33.33\%$$

Since $PR = 2100$:

We must evaluate:

$$(-9) - (-60) \div (-12) + (-4) \times 8$$

1) Follow the order of operations

Do **Division** and **Multiplication** before Addition/Subtraction (left → right).

2) Do the division

$$(-60) \div (-12) = +5$$

Same signs ($- \div -$) give a **positive**.

Now the expression is:

$$(-9) - 5 + (-4) \times 8$$

53. ANSWER D

EXPLANATION

3) Do the multiplication

$$(-4) \times 8 = -32$$

Different signs ($- \times +$) give a **negative**.

Now we have:

$$(-9) - 5 + (-32)$$

4) Turn all into addition of signed numbers

- " -5 " is the same as " $+(-5)$ ".
- " $+(-32)$ " stays as is.

So:

$$-9 + (-5) + (-32)$$

5) Add the negatives step by step

- $-9 + (-5) = -14$
- $-14 + (-32) = -46$

Therefore, the value is **-46** ✓

Tiny sanity check

All three terms are negative after the DM steps, so the result must be negative:

$$-9 - 5 - 32 = -(9 + 5 + 32) = -46.$$

54. ANSWER A

EXPLANATION

Method 1: Pure algebra

Let

- S = selling price per chair
- C = cost price per chair
- Number of chairs sold = 153

Given: Total profit equals the selling price of 53 chairs, i.e.

$$\text{Profit} = 53S.$$

But profit is also:

$$\text{Profit} = \text{Total SP} - \text{Total CP} = (153S) - (153C).$$

Set them equal:

$$153S - 153C = 53S \implies 153S - 53S = 153C \implies 100S = 153C \implies C = \frac{100}{153}S.$$

$$\text{Profit \%} = \frac{\text{Profit}}{\text{Cost}} \times 100$$

$$\text{Total profit} = 53S, \text{ total cost} = 153C = 153 \times \frac{100}{153}S = 100S.$$

So,

$$\text{Profit \%} = \frac{53S}{100S} \times 100 = 53\%.$$

Method 2: Assume easy numbers

Assume $C = ₹100$ per chair (you can choose any number; the % won't change).

- Total cost = $153 \times 100 = ₹15,300$.
- Let $S = ₹s$. Then total SP = $153s$.

Given profit = $53s$. Also,

$$\text{Profit} = 153s - 15,300.$$

Equate:

$$153s - 15,300 = 53s \implies 100s = 15,300 \implies s = 153.$$

So per-chair profit = $153 - 100 = ₹53$.

$$\text{Profit \%} = \frac{53}{100} \times 100 = 53\%.$$

Final: 53%

55. ANSWER B

EXPLANATION

1. Formula for volume of a cylinder:

$$V = \pi r^2 h$$

For two cylinders (1 and 2),

$$\frac{V_1}{V_2} = \frac{\pi r_1^2 h_1}{\pi r_2^2 h_2} = \frac{r_1^2 h_1}{r_2^2 h_2}$$

(π cancels out.)

2. Use the given ratios:

Radius ratio $r_1 : r_2 = 4 : 5 \Rightarrow r_1 = 4k, r_2 = 5k$.

Height ratio $h_1 : h_2 = 5 : 2 \Rightarrow h_1 = 5m, h_2 = 2m$.

(Values of k, m cancel later; they just keep ratios consistent.)

3. Plug into the volume ratio:

$$\frac{V_1}{V_2} = \frac{(4k)^2 \cdot (5m)}{(5k)^2 \cdot (2m)} = \frac{16k^2 \cdot 5m}{25k^2 \cdot 2m}$$

4. Cancel common factors k^2 and m :

$$= \frac{16 \cdot 5}{25 \cdot 2} = \frac{80}{50}$$

5. Reduce the fraction:

Divide numerator and denominator by 10:

$$\frac{80}{50} = \frac{8}{5}$$

So, the ratio of their volumes is **8 : 5**.

56. ANSWER D

EXPLANATION

1) Make the total work easy

Take the total work as the **LCM of 15 and 20 = 60 units**.

(So finishing the job = doing 60 units.)

2) Find how much each can do in 1 day

- A can finish in 15 days $\Rightarrow$ A does $60 \div 15 = 4$ units/day.
- B can finish in 20 days $\Rightarrow$ B does $60 \div 20 = 3$ units/day.

3) See what happens when they alternate (A starts)

- Day 1 (A): +4 units
- Day 2 (B): +3 units

So, every 2 days they complete $4 + 3 = 7$ units.

4) Use full 2-day cycles until you're close to 60

- After 2 days → 7 units
- After 4 days → 14 units
- After 6 days → 21 units
- After 8 days → 28 units
- After 10 days → 35 units
- After 12 days → 42 units
- After 14 days → 49 units
- After 16 days → 56 units (that's 8 cycles)

5) What's left after 16 days?

Total needed = 60 units, done = 56 units $\Rightarrow$ left = 4 units.

Final: 17 days

57. ANSWER D

EXPLANATION

Step 1: Let the normal time be t minutes

- Distance between A and B is fixed.
- If normal speed is v , then distance $D = v \times t$.

Step 2: Slow speed $\Rightarrow$ time becomes longer (inverse relation)

- New speed = $\frac{1}{3}v$.
- New time = $\frac{D}{\text{new speed}} = \frac{vt}{(v/3)} = 3t$.
 - (When speed becomes $\frac{1}{3}$, time becomes 3 times.)

Step 3: Use the "36 minutes late" info

- Delay = new time – normal time = $3t - t = 2t$.
- Given delay = 36 minutes, so $2t = 36$.

Step 4: Solve for t

- $t = \frac{36}{2} = 18$ minutes.

Step 5: Quick check

- At $\frac{1}{3}$ speed, time = $3 \times 18 = 54$ min.
- Delay = $54 - 18 = 36$ min ✓

Answer: 18 minutes (option d).

One-line shortcut:

"Speed = $\frac{1}{3} \Rightarrow$ time becomes 3 times $\Rightarrow$ extra time = $(3 - 1) \times t = 2t$. If extra time is 36, then $t = 36/2 = 18$."

58. ANSWER D

EXPLANATION

Step 1: Assume Savings

Let Sudha's **savings** = 100 (easy number to work with).

Step 2: Find her Expenditure

Expenditure is **125% more** than savings.

That means:

$$E = 100 + 125\% \text{ of } 100$$

$$E = 100 + 125 = 225$$

So:

- Savings = 100
- Expenditure = 225

Step 3: Find her Income

Income is the sum of savings and expenditure:

$$I = S + E = 100 + 225 = 325$$

Step 4: Apply the changes

- Expenditure decreases by **14%**:

$$E' = 225 \times (1 - 0.14) = 225 \times 0.86 = 193.5$$

- Savings increase by **38%**:

$$S' = 100 \times (1 + 0.38) = 100 \times 1.38 = 138$$

Step 5: New Income

$$I' = S' + E' = 138 + 193.5 = 331.5$$

Step 6: Increase in Income

$$\text{Increase} = I' - I = 331.5 - 325 = 6.5$$

$$\begin{aligned}\% \text{ Increase} &= \frac{6.5}{325} \times 100 \\ &= 2\%\end{aligned}$$

Final Answer: 2%

59 .ANSWER

EXPLANATION

Given:

- Average of Mohammad (M), Ashish (A), Kiran (K) = 46
 $\Rightarrow M + A + K = 3 \times 46 = 138$
- Average of M & A = 40
 $\Rightarrow M + A = 2 \times 40 = 80$
- Average of A & K = 42
 $\Rightarrow A + K = 2 \times 42 = 84$

Step 1: Add the two pair-sums

$$(M + A) + (A + K) = 80 + 84 = 164$$

Left side becomes:

$$M + 2A + K$$

Step 2: Replace $M + K$ using the total of all three

From $M + A + K = 138$, we get:

$$M + K = 138 - A$$

So,

$$M + 2A + K = (M + K) + 2A = (138 - A) + 2A = 138 + A$$

Step 3: Equate the two expressions for $M + 2A + K$

$$138 + A = 164 \Rightarrow A = 164 - 138 = 26$$

Quick sanity check

- If $A = 26$:
 $M + A = 80 \Rightarrow M = 54$
 $A + K = 84 \Rightarrow K = 58$
Total = $54 + 26 + 58 = 138 \rightarrow \text{Average} = 138/3 = 46$ ✓

Answer: 26 kg

60. ANSWER A

EXPLANATION

What does "Buy 5, get 3 free" mean?

- You pay for 5 items.
- You receive 8 items (5 paid + 3 free).

Think in easy numbers

Assume the marked price (MRP) of 1 item = ₹100 (any number works; % won't change).

- If you bought 8 items at full price, you would pay:
 $8 \times ₹100 = ₹800$.
- Under the offer, you pay only for 5 items:
 $5 \times ₹100 = ₹500$.

Calculate the discount amount

- Discount amount = What you would have paid — What you actually pay
= ₹800 — ₹500 = ₹300.

Convert to percentage

- Discount % = $\frac{\text{Discount amount}}{\text{Original full price for 8}} \times 100$
= $\frac{300}{800} \times 100 = 37.5\%$.

Super-short intuitive way (no numbers)

You received 8 items, but 3 were free.

So the free (discount) portion is $\frac{3}{8}$ of the total value.

$$\frac{3}{8} \times 100 = 37.5\%.$$

Quick cross-check via average price per item

- Effective price per item = $\frac{\text{Total paid}}{\text{Total items received}} = \frac{5}{8}$ of MRP
That's 62.5% of MRP.
- Therefore, discount = $100\% - 62.5\% = 37.5\%$. ✓

Final: Effective discount = 37.5%.

61. ANSWER B

EXPLANATION

Ensure

- Meaning: to make certain of something.
- Correct spelling ✓

Calender

- This looks suspicious.
- The correct word used in daily life is Calendar (which means a system of organizing days, months, and years).
- "Calender" is actually a different, rare word (a machine used in the textile/paper industry to smooth material), but in the context of a general spelling question, the examiner expects the normal word Calendar.
- So this is INCORRECT for the purpose of the exam. ✗

Apology

- Meaning: an expression of regret.
- Correct spelling ☒
 - Correct spelling ☒
- Certificate
 - Meaning: an official document.
 - Correct spelling ☒

Step 2: Identify the incorrect one

- The incorrectly spelt word (as per normal English vocabulary expected in exams) is Calender.

Final Answer:

Option b. Calender

✓ Correct spelling: Calendar

62 . ANSWER B

EXPLANATION

Step 1: Understand the meaning of coherent

- Coherent means:
 - Clear, logical, and consistent.
 - Example: "Her explanation was coherent, so everyone understood it easily."

So if something is coherent, it makes sense, it's understandable.

Step 2: Recall what an antonym is

- An antonym is the opposite in meaning of a given word.

- So we need the opposite of “clear, logical, understandable.”

Step 3: Check each option

1. Logical

- Meaning: reasonable, based on clear reasoning.
- This is actually similar in meaning to “coherent,” not opposite. ✗

2. Incomprehensible

- Meaning: not understandable, difficult or impossible to understand.
- This is the direct opposite of “coherent.” ✓

3. Lacklustre

- Meaning: dull, without shine, uninspiring.
- Not related to clarity of thought, so not correct here. ✗

4. Systematic

- Meaning: methodical, organized, orderly.
- Again, this is similar in sense to “coherent,” not opposite. ✗

Step 4: Identify the correct answer

- The opposite of coherent (clear, logical, understandable) is
incomprehensible (unclear, impossible to understand).

✓ Final Answer:

Option b. Incomprehensible

63. ANSWER B

EXPLANATION

Step 1: Understand the meaning of existential

- Existential (in this context) means:
 - Relating to existence, survival, or continued being.
 - So, an existential threat means: *a threat so serious that it could destroy existence itself (wipe out survival).*

Example: "Nuclear war is an existential threat to humanity."

Step 2: Recall what an antonym is

- An antonym = opposite meaning.
 - So we need the opposite of existential (threat to existence).
-

- The opposite would mean something that supports or improves existence/survival.

Step 3: Check each option

1.Demand

- Meaning: a strong request or need.

- Not related to existence or survival. ✗

2.Development

- Meaning: growth, progress, improvement.

- Yes ☒ → If something is an “existential threat” (danger to survival), the opposite would be something that promotes survival, growth, and progress → development.

3. Distribution

- Meaning: sharing or giving out.
- Not related to existence vs. survival. ✗

4. Disaster

- Meaning: catastrophe, great damage.
- This is actually similar in sense to “existential threat,” not opposite. ✗

Step 4: Identify the correct answer

- The correct antonym of existential (threat) is development (progress/improvement).

✓ Final Answer:

Option b. Development

64. ANSWER D

EXPLANATION

Step 1: Meaning of the underlined word elated

- Elated means extremely happy, joyful, or overjoyed.

- So we need an idiom that expresses great happiness.

Step 2: Check each idiom

1. Walking on thin ice

- Meaning: being in a risky or dangerous situation.
- Example: "After missing two deadlines, he was walking on thin ice with his boss."
- ✗ Not related to happiness.

2. Walking on a dream

- Not a standard idiom in English (sounds poetic, but not commonly used as an idiom).
- ✗ Not correct here.

3. Walking on eggshells

- Meaning: being very cautious in order not to upset someone or make a mistake.
- Example: "Since the argument, he has been walking on eggshells around her."
- ✗ Not about happiness, it's about caution.

4. Walking on air

- Meaning: being extremely happy, joyful, or elated.
- Example: "She was walking on air after hearing the good news."
- ✓ This matches perfectly with "elated."

Step 3: Correct substitution

- The idiom that correctly replaces elated is walking on air.

✓ Final Answer:

Option d. walking on air

65. ANSWER C

EXPLANATION

Step 1: Meaning of the word Companion

• Companion means:

- Someone you spend time with, a friend, or a partner in activities.
- Example: "The dog has been his constant companion."

So we are looking for a synonym (word with similar meaning).

Step 2: Check each option

1. Enemy

- Meaning: opponent, rival, someone hostile.

- This is the opposite of companion, not a synonym. ✗

2. Sister

- Meaning: female sibling.

- Asister *can* be a companion, but the word sister specifically

means a family relation, not a general synonym for “companion.”

✗

3.Mate

- Meaning: friend, buddy, partner (commonly used in British/Australian English).

- Example: "He is my best mate."

- This matches very closely with "companion." ☒

4.Neighbour

- Meaning: a person living next door or nearby.
- Aneighbour can sometimes be a companion, but the word doesn't directly mean companion. ✗

Step 3: Identify the correct synonym

- The word mate is the best synonym for companion.

✓ Final Answer:

Option c. Mate

66. ANSWER C

EXPLANATION

Step 1: Understand the key phrase

The sentence is about a bird starting to fly. The phrase “before it ____ flight” is a common collocation (words that naturally go together in English).

The well-known collocation is:

✎ “take flight” = to begin flying.

Step 2: Check each option

1. got flight

○ Not a standard English collocation. ✖

2. had flight

○ Also not used in English. ✖

3. took flight

- ☒ This is the correct and natural collocation.

- Example: “The pigeons took flight when they heard the loud noise.”

4. laid flight

- Not meaningful in this context (birds lay eggs, not “lay flight”). ✗

Step 3: Correct answer

- The correct and natural phrase is “took flight”.

☒ Final Answer:

Option c. took

67. ANSWER C

EXPLANATION

Step 1: Understand the context

- The sentence talks about workers uniting and leaving the factory together to protest.

- So the missing word should mean “all together, in large numbers.”

Step 2: Check each option

1. impasse

- Meaning: a deadlock, a situation with no progress.

- Example: "The talks ended in an impasse."

- ✗ Doesn't fit the context.

2.en-route

- Meaning: on the way, in transit.

- Example: "He is en-route to Delhi."

- ✗ Not correct here, because the focus is on how they left
(together), not where they were going.

3.en-masse

- Meaning: all together, in large numbers, as a group.
- Example: "The students left the hall en-masse."
- ☒ Perfect fit! Matches the sense of unity and collective action in the sentence.

4. ex-facto

- Related to "ex post facto," meaning retroactive, applying to something after the fact.
- ☒ Not related to workers leaving together.

Step 3: Correct answer

- The best word is en-masse because it means “all together as one group.”

☒ Final Answer:

Option c. en-masse

68 . ANSWER D

EXPLANATION

Step 1: Read the sentence as a whole

“The friends excited planned their upcoming vacation, researching destinations and creating an itinerary filled with thrilling activities and adventures.”

Step 2: Check each segment

(A) The friends excited planned their upcoming vacation

- Problem: The word “excited” is an adjective (describes a noun).
- But here it is used wrongly to describe the verb “planned.”
- To describe a verb, we need an adverb.
- Correct usage: “The friends excitedly planned their upcoming vacation.”



So this segment has a grammatical error.

(B) researching destinations

- This is correct → gerund/participle phrase describing what they were doing. ✓

(C) and creating an itinerary filled with

- Correct → another participle phrase continuing the action. ✓

(D) thrilling activities and adventures

- Correct → “thrilling” (adjective) is properly used to describe “activities.” ✓
-

Step 3: Identify the error

- Only (A) is wrong because “excited” (adjective) is incorrectly used instead of “excitedly” (adverb).

✓ Final Answer:

Option d. A

Correct sentence:

The friends excitedly planned their upcoming vacation, researching destinations and creating an itinerary filled with thrilling activities and adventures.

69. ANSWER B

EXPLANATION

Step 1: Recall what an adverb is

- An adverb describes a verb, adjective, or another adverb.
- Time adverbs (last night, tomorrow, yesterday, next week) usually come at the end of a sentence (or sometimes at the beginning for emphasis).

Step 2: Check each option

a. He called his friend last night.

- “last night” = adverb of time.
- Correct placement: comes at the end, natural. ☒

b. I'll submit next week the assignment to you.

- Here “next week” = adverb of time.

- But its placement is wrong. It should be:

- “I’ll submit the assignment to you next week.”

- The phrase “next week” is awkwardly placed between “submit” and “the assignment.”

- ✗ This is incorrect usage.

c. I will send you the report tomorrow.

- “tomorrow” = adverb of time.

- Correct position at the end. ✓

d. They met for lunch yesterday.

- “yesterday” = adverb of time.

- Correct position at the end. ☒
-

Step 3: Identify the error

- Only option b has incorrect usage of the adverb “next week.”

☒ Final Answer:

Option b. I'll submit next week the assignment to you.

Corrected sentence:

I'll submit the assignment to you next week.

70. ANSWER D

EXPLANATION

Step 1: Understand the context

- The detective found crucial evidence that others had missed.
- This means the detective's examination must have been careful, detailed, and deep.
- So, the blank needs a word with this meaning.

Step 2: Check each option

1. superficial

- Meaning: shallow, not detailed, only on the surface.

- Example: "His superficial knowledge of the subject caused him to fail."

- **✗** Opposite meaning of what we need.

2. hasty

- Meaning: done quickly, without care.
- Example: "He made a hasty decision and regretted it later."

- **✗** Doesn't fit, because a quick careless examination wouldn't reveal missed evidence.

3. cursory

- Meaning: quick and not detailed, only a glance.
- Example: “She gave a cursory look at the paper.”
- ✗ Again, opposite of what is needed.

4. thorough

- Meaning: complete, detailed, careful, leaving nothing unchecked.
- Example: “The inspector conducted a thorough review of the documents.”
- ✓ Perfect match — a thorough examination would reveal crucial evidence others missed.

Step 3: Correct Answer

The word that best fits the blank is thorough.

✓ Final Answer:

Option d. thorough

71. ANSWER C

EXPLANATION

Step 1: Understand the word in brackets — benevolence

Benevolence means:

The quality of being kind, helpful, and generous.

Example: “Her benevolence towards the poor was well known.”

So we need a synonym that matches this meaning.

Step 2: Check each option

intention

Meaning: purpose, aim, or plan.

Example: “It was not my intention to hurt you.”

✗ Not related to kindness.

liberty

Meaning: freedom, independence.

Example: "Citizens enjoy liberty in a democracy."

✗ Not related to benevolence.

kindness

Meaning: the quality of being kind, caring, or generous.

Example: "She showed great kindness to strangers."

✓ Perfect synonym of benevolence.

suspicion

Meaning: doubt, mistrust.

Example: "He looked at me with suspicion."

✗ Opposite in tone, not correct here.

Step 3: Correct answer

The most appropriate synonym of benevolence is kindness.

✓ Final Answer:

Option c. kindness

72. ANSWER A

EXPLANATION

Step 1: Recognize the idiom

- The phrase here is actually a common idiom in English:

👉 “a fish out of water”

- Meaning: feeling uncomfortable, awkward, or not in the right situation.

- Example: “He felt like a fish out of water at the fancy party because he didn’t know anyone.”

Step 2: Check each option

1.water

- Correct idiom = “fish out of water.” 

2. river

- “Fish out of river” is not a valid idiom. 

3. pond

- “Fish out of pond” is not a valid idiom. 

4. sea

- “Fish out of sea” is not a valid idiom. 

Step 3: Correct Answer



- The only correct and widely used idiom is “a fish out of water.”

✓ Final Answer:

Option a. water

73. ANSWER B

EXPLANATION

Step 1: Meaning of the word

- The intended word here is “niggardly.”
- Niggardly means:
 - miserly, stingy, giving very little.

- Example: "The bonus was so niggardly that the employees felt insulted."

Step 2: Check each option

1.Niggarddly

- Incorrect: has an extra d. ✗

2.Niggardly

- Correct spelling. ✓

3.Niiggardly

- Incorrect: has an extra i. ✗

4.Niggardly

- Incorrect: missing a g. ✗

Step 3: Correction in the sentence

- The wrong word “niggardlly” should be corrected to “niggardly.”

Corrected sentence:

Despite his contributions to the institute, he was given a niggardly raise in his salary.

✓ Final Answer:

Option b. Niggardly

74. ANSWER C

EXPLANATION

Step 1: Understand the structure

- The phrase “all by oneself” means *without help from others, alone*.
- The reflexive pronoun must match the subject of the sentence.

Step 2: Check subject of the sentence

- Subject = He

- Correct reflexive pronoun for “he” = himself
-

Step 3: Check each option

1. herself

○ Reflexive for “she.”

○ Doesn't match subject “he.” ✗

2. myself

○ Reflexive for “I.”

- Doesn't match subject "he." ✗

3. himself

- Reflexive for "he."

- Correct match. ✓

4. yourself

- Reflexive for "you."

- Doesn't match subject "he." ✗

Step 4: Correct sentence

He made the cake all by himself.

✓ Final Answer:

Option c. himself

75. ANSWER B

Step 1: Meaning of the word Fragile

• Fragile means:

- Easily broken, weak, delicate, not strong.
- Example: "Be careful with that vase, it's very fragile."

So, the synonym must have the same or very close meaning.

Step 2: Check each option

1.Strong

- Meaning: powerful, not easily broken, opposite of fragile.
- ☒ This is actually the antonym, not synonym.

2.Delicate

- Meaning: fine, easily broken, sensitive.
 - Example: "The delicate flowers withered quickly."
 - ☒ This is the closest synonym of fragile.
-

3.Heavy

- Meaning: having great weight.
- Not related to being easily broken.
- ✗ Incorrect.

4. Shiny

- Meaning: bright, glossy, reflective.
- Not connected to fragility.
- ✗ Incorrect.

Step 3: Correct Answer

- The word delicate is the correct synonym for fragile.
-

✓ Final Answer:

Option b. Delicate

76. ANSWER B

EXPLANATION

Step 1: Understand the context

- The sentence is about wetter periods in North Africa that happen every 21,000 years.
-

- This means the event is repeated in cycles, not stopped.
- So the correct word should mean “happened again and again at intervals.”

Step 2: Check each option

1. seized

- Meaning: grabbed, taken suddenly.
- Example: “The police seized the stolen goods.”
- **✗** Does not fit here.

2. recurred

- Meaning: happened again repeatedly, occurred at intervals.
- Example: "The fever recurred after a week."
- ☒ Perfect fit → wetter periods recurred every 21,000 years.

3. abated

- Meaning: reduced, lessened, died down.
- Example: "The storm abated after two hours."

- ✗ Doesn't fit, because the passage is about repetition, not reduction.

4. terminated

- Meaning: ended, stopped completely.
- Example: "The contract was terminated by the company."
- ✗ Opposite meaning of what is intended.

Step 3: Correct answer

- The correct word is **recurred**, because it expresses the idea of repeating cycles every 21,000 years.

✓ Final Answer (Blank 1):

Option b. **recurred**

77. ANSWER D

EXPLANATION

Step 1: Understand the sentence meaning

- The sentence is trying to say: *wetter periods in North Africa recur every 21,000 years, and the reason (what makes them happen) is variations in Earth's orbit.*

- So Blank 2 must mean “makes them happen”.

Step 2: Check each option

1.delegates

- Meaning: to assign responsibility to someone.
- Example: “The manager delegated work to his team.”

- ✗ Doesn't make sense here (orbital variations don't “delegate”

wetter periods).

2.debates

- Meaning: arguments or discussions.
- Example: "The debate lasted two hours."
- ✗ Grammatically wrong in this context.

3.bids

- Meaning: attempts, offers.
- Example: "He made a bid for the painting."
- ✗ Doesn't fit logically here.

4. causes

- Meaning: makes something happen, the reason behind an event.
- Example: "Smoking causes lung cancer."
- ☒ Perfect fit → variations in Earth's orbit cause the wetter periods.

Step 3: Correct sentence

The fact that the wetter periods in North Africa have recurred every 21,000 years or so is a big clue about what causes them: variations in Earth's orbit.

☒ Final Answer (Blank 2):

Option d. causes

78. ANSWER C

EXPLANATION

Step 1: Understand the meaning of the sentence

- The sentence describes Earth's orbit in relation to the Sun.
- We know from science: Earth revolves around the Sun.
- So, the blank should express that relationship: orbit of Earth around the Sun.

Step 2: Check each option

1.direct

- Meaning: straight, without deviation.
- “orbit direct the sun” does not make sense. ✗

2. straight

- Orbits are not straight; they are curved paths.
- “orbit straight the sun” is grammatically wrong. ✗

3. around

- Meaning: encircling, revolving about something.

- Fits perfectly: “the orbit of the Earth around the sun is not constant.” ✓

4. precise

- Meaning: exact, accurate.

- “orbit precise the sun” is grammatically incorrect. ✗

Step 3: Correct sentence

Due to gravitational influences from the moon and other planets in our solar system, the orbit of the Earth around the sun is not constant.

✓ Final Answer (Blank 3):

Option c. around

79. ANSWER B

EXPLANATION

Step 1: Understand the meaning of the sentence

- The sentence describes Earth's orbit under gravitational influences.
- The word "cyclic" means repeating in cycles.
- So the blank should describe changes that happen in cycles.

Step 2: Check each option

1.monotonies

- Meaning: dullness, sameness, lack of variety.
- Example: “The monotony of daily routine tired him.”
- ✗ Doesn’t make sense, because we are talking about changes in orbit.

2.variations

- Meaning: differences, changes.
- Example: “Temperature variations occur between day and night.”
- ✓ Fits perfectly — the orbit has cyclic variations (repeating changes) over thousands of years.

3. consistencies

- Meaning: uniformity, being the same.
- Example: “She maintained consistency in her work.”
- ✗ Opposite of variations, so wrong here.

4. regularities

- Meaning: something happening in a fixed pattern.
- Example: “The regularity of sunrise is certain.”

- ✗ While orbital cycles are regular, the more precise scientific term used is cyclic variations, not “cyclic regularities.”

Step 3: Correct sentence

It has cyclic variations on multi-thousand year timescales.

This makes perfect sense: Earth’s orbit changes in repeating cycles.

✓ Final Answer (Blank 4):

Option b. variations

80. ANSWER D

EXPLANATION

Step 1: Understand the meaning of the sentence

- The subject is orbital cycles (changes in Earth's orbit).
- The sentence explains what these cycles do to the amount of solar energy Earth receives.
- Orbital cycles affect or control this energy.
- So the word must mean "affect."

Step 2: Check each option

1. believe

- Meaning: to accept something as true.

- Example: "I believe in hard work."
- ✗ Doesn't fit here. Orbital cycles cannot "believe" something.

2. stretch

- Meaning: to extend, to lengthen.
- Example: "She stretched her arms."
- ✗ Doesn't make sense with energy received from the sun.

3. return

- Meaning: to give back, to come back.

- Example: "He returned home after work."

- ☒ Not logical in this context.

4. influence

- Meaning: to affect, to have an effect on.

- Example: "The weather influences our mood."

- ☒ Perfect match — orbital cycles influence the amount of energy

Earth gets from the sun.

Step 3: Correct sentence

These orbital cycles influence the amount of energy the Earth receives from the sun.

This fits logically and scientifically.

✓ Final Answer (Blank 5):

Option d. influence

