

GATE 2025 Linguistics (XH-C3) Question Paper with Solutions

Time Allowed :180 Minutes	Maximum Marks :100	Total Questions :65
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. **Total Marks:** The GATE Linguistics (XH-C3) paper is worth 100 marks.
2. **Question Types:** The paper consists of 65 questions, divided into:
 - General Aptitude (GA): 15 marks
 - Linguistics: 85 marks
3. **Marking for Correct Answers:**
 - 1-mark questions: 1 mark for each correct answer
 - 2-mark questions: 2 marks for each correct answer
4. **Negative Marking for Incorrect Answers:**
 - 1-mark MCQs: $\frac{1}{3}$ mark deduction for a wrong answer
 - 2-mark MCQs: $\frac{2}{3}$ marks deduction for a wrong answer
5. **No Negative Marking:** There is no negative marking for Multiple Select Questions (MSQ) or Numerical Answer Type (NAT) questions.
6. **No Partial Marking:** There is no partial marking in MSQ.

General Aptitude

1. Here are two analogous groups, Group-I and Group-II, that list words in their decreasing order of intensity. Identify the missing word in Group-II.

Abuse → Insult → Ridicule

----- → Praise → Appreciate

- (A) Extol
- (B) Prize
- (C) Appropriate
- (D) Espouse

Correct Answer: (A) Extol

Solution: Step 1: Identify the relationship in Group-I.

In Group-I, the words are listed in decreasing order of intensity: Abuse → Insult → Ridicule. Abuse is the most intense, followed by Insult, and Ridicule is the least intense.

Step 2: Identify the relationship in Group-II.

Group-II must follow a similar pattern of decreasing intensity. The words listed are: ----- → Praise → Appreciate. Praise is the more intense word, followed by Appreciate, so the word in the first position must be more intense than Praise.

Step 3: Analyze the options.

- (A) Extol: This word means to praise highly, which fits the highest intensity, making it the best choice.
- (B) Prize: This word doesn't match the intensity pattern of the words in Group-II.
- (C) Appropriate: This word doesn't fit the pattern of decreasing intensity.
- (D) Espouse: This word means to adopt or support, but it doesn't convey a higher level of praise than Praise, so it's not suitable.

Quick Tip

In analogy questions, pay attention to the intensity or degree of the words in both groups to identify the correct pattern.

2. Had I learnt acting as a child, I ----- a famous film star.

Select the most appropriate option to complete the above sentence.

- (A) will be
- (B) can be
- (C) am going to be
- (D) could have been

Correct Answer: (D) could have been

Solution: Step 1: Analyze the structure of the sentence.

The sentence begins with "Had I learnt acting as a child," which indicates a hypothetical situation in the past. The phrase is a third conditional sentence, which is used to express unreal past situations and their possible outcomes.

Step 2: Understand the choices.

(A) will be: This option suggests a future possibility, but the sentence is about a past unreal condition, so it is incorrect.

(B) can be: This implies a present or future possibility, which does not fit the unreal past condition.

(C) am going to be: This suggests a future intention, which doesn't fit the context of an unreal past condition.

(D) could have been: This is the correct choice, as it expresses a hypothetical outcome in the past, matching the structure of the third conditional.

Step 3: Conclude.

Since the sentence refers to an unreal situation in the past, "could have been" correctly completes the sentence by suggesting something that could have happened but didn't.

 Quick Tip

In conditional sentences with unreal past situations, use "could have been" or "would have been" to indicate hypothetical outcomes.

3. The 12 musical notes are given as $C, C^\#, D, D^\#, E, F, F^\#, G, G^\#, A, A^\#, B$.

Frequency of each note is $\sqrt[12]{2}$ times the frequency of the previous note. If the frequency of the note C is 130.8 Hz, then the ratio of frequencies of notes $F^\#$ and C is:

(A) $\sqrt{6}$

(B) $\sqrt{2}$

(C) $4\sqrt{2}$

(D) 2

Correct Answer: (B) $\sqrt{2}$

Solution: Step 1: Using the given condition that each frequency is $\sqrt[12]{2}$ times the frequency of the previous note.

The ratio of the frequencies of any two notes can be expressed as:

$$\text{Frequency ratio} = \left(\sqrt[12]{2} \right)^n$$

where n is the number of steps between the two notes.

Step 2: Finding the ratio of frequencies of $F^\#$ and C.

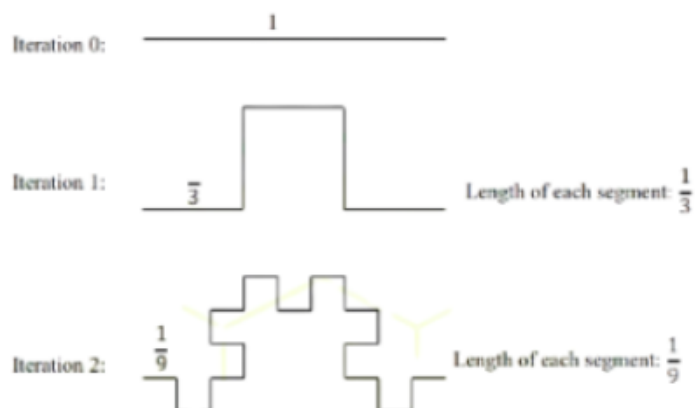
Since $F^\#$ is 6 steps away from C in the sequence, we have:

$$\text{Ratio of frequencies of } F^\# \text{ and C} = \left(\sqrt[12]{2} \right)^6 = \sqrt{2}.$$

 Quick Tip

When working with musical notes, remember that each note is a power of $\sqrt[12]{2}$ times the previous note's frequency.

4. The following figures show three curves generated using an iterative algorithm. The total length of the curve generated after 'Iteration n' is:



- (A) $\left(\frac{5}{3}\right)^{\frac{n}{2}}$
 (B) $\left(\frac{5}{3}\right)^n$
 (C) $2n$
 (D) $\left(\frac{5}{3}\right)^n (2n - 1)$

Correct Answer: (B) $\left(\frac{5}{3}\right)^n$

Solution: Step 1: Analyzing the iterative process. In the first iteration (Iteration 0), the length of the curve is 1. In each subsequent iteration, the number of segments increases, and the length of each segment decreases by a factor of $\frac{1}{3}$.

Step 2: Finding the total length after each iteration. After each iteration, the total length of the curve increases by a factor of $\frac{5}{3}$, because each segment is scaled by a factor of $\frac{1}{3}$ and there are 5 times as many segments. Thus, the total length after 'Iteration n' is:

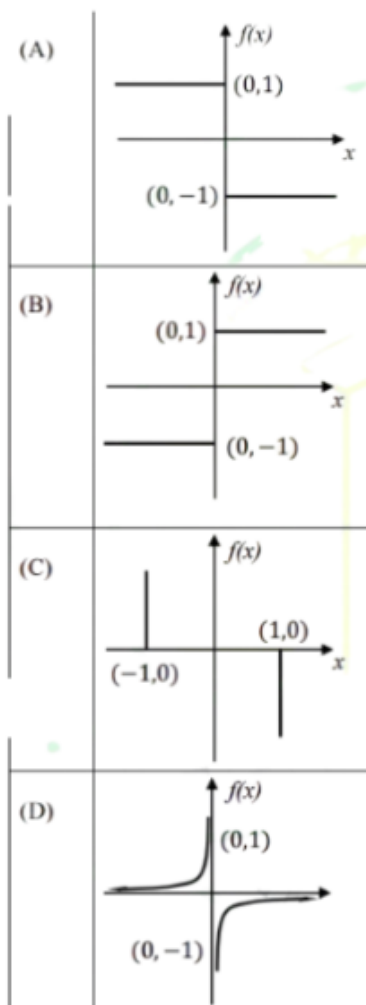
$$\text{Total length} = \left(\frac{5}{3}\right)^n.$$

💡 Quick Tip

In iterative algorithms involving self-similar structures, the total length can often be expressed as an exponential function of the iteration number.

5. Which one of the following plots represents $f(x) = -\frac{|x|}{x}$, where x is a non-zero real number?

Note: The figures shown are representative.



Correct Answer: (A)

Solution: Step 1: Analyze the function.

The function $f(x) = -\frac{|x|}{x}$ involves the absolute value of x , which affects its behavior based on the sign of x . The function can be rewritten as:

$$f(x) = \begin{cases} -1 & \text{if } x > 0 \\ 1 & \text{if } x < 0 \end{cases}$$

Thus, for $x > 0$, $f(x) = -1$, and for $x < 0$, $f(x) = 1$.

Step 2: Identify the correct graph.

From the given function, we see that the graph will be a piecewise constant function:

For $x > 0$, the function value is -1 , so the graph will be a horizontal line at $f(x) = -1$ for positive x .

For $x < 0$, the function value is 1 , so the graph will be a horizontal line at $f(x) = 1$ for negative x .

Step 3: Compare with the options.

Option (A) matches this behavior, where for $x > 0$, $f(x) = -1$, and for $x < 0$, $f(x) = 1$. The graph shows this exact pattern, making it the correct choice.

 Quick Tip

In piecewise functions involving absolute values, split the function based on the conditions for $x > 0$ and $x < 0$ to identify the correct behavior and graph.

6. Identify the option that has the most appropriate sequence such that a coherent paragraph is formed:

P: Over time, such adaptations lead to significant evolutionary changes with the potential to shape the development of new species.

Q: In natural world, organisms constantly adapt to their environments in response to challenges and opportunities.

R: This process of adaptation is driven by the principle of natural selection, where favorable traits increase an organism's chances of survival and reproduction.

S: As environments change, organisms that can adapt their behavior, structure, and physiology to such changes are more likely to survive.

(A) $P \rightarrow Q \rightarrow R \rightarrow S$

(B) $Q \rightarrow S \rightarrow R \rightarrow P$

(C) $R \rightarrow S \rightarrow Q \rightarrow P$

(D) $S \rightarrow P \rightarrow R \rightarrow Q$

Correct Answer: (B)

Solution:

Step 1: Identify the logical flow of ideas.

Q provides the initial context: organisms adapt to their environment.

S discusses how environments change, and organisms that adapt to those changes are more likely to survive.

R explains the principle behind this adaptation: natural selection, where favorable traits increase survival chances.

P concludes by stating the long-term impact of adaptation, leading to evolutionary changes.

Step 2: Analyze the options.

(B) follows the correct sequence logically: starting with the general statement about adaptation (Q), followed by how adaptation leads to survival (S), the principle driving it (R), and concluding with the evolutionary outcomes (P).

 Quick Tip

Ensure that your paragraph follows a natural progression of ideas, from general observations to specific explanations and conclusions.

7. A stick of length one meter is broken at two locations at distances of b_1 and b_2

from the origin (0), as shown in the figure. Note that $0 < b_1 < b_2 < 1$. Which one of the following is NOT a necessary condition for forming a triangle using the three pieces?

Note: All lengths are in meter. The figure shown is representative.



- (A) $b_1 < 0.5$
- (B) $b_2 > 0.5$
- (C) $b_2 < b_1 + 0.5$
- (D) $b_1 + b_2 < 1$

Correct Answer: (D) $b_1 + b_2 < 1$

Solution: Step 1: Apply the triangle inequality theorem.

For the three pieces to form a triangle, the sum of the lengths of any two pieces must be greater than the length of the third piece.

Step 2: Analyze the options.

(A) $b_1 < 0.5$ is a necessary condition. If b_1 were greater than or equal to 0.5, the other pieces would be too small to form a triangle.

(B) $b_2 > 0.5$ is necessary because, if $b_2 \leq 0.5$, the sum of the two smaller pieces would not be enough to form a triangle.

(C) $b_2 < b_1 + 0.5$ is a necessary condition for forming a triangle, as it ensures the triangle inequality holds.

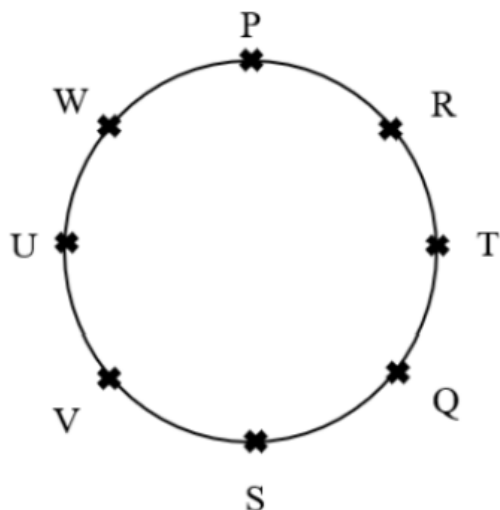
(D) $b_1 + b_2 < 1$ is NOT a necessary condition for forming a triangle. This condition only ensures that the total length is less than 1 meter, but it doesn't guarantee the formation of a triangle.

💡 Quick Tip

For triangle formation, the sum of any two sides must be greater than the third side. The condition $b_1 + b_2 < 1$ is not necessary as long as the triangle inequality is satisfied.

8. Eight students (P, Q, R, S, T, U, V, and W) are playing musical chairs. The figure indicates their order of position at the start of the game. They play the game by moving forward in a circle in the clockwise direction.

After the 1st round, 4th student behind P leaves the game. After 2nd round, 5th student behind Q leaves the game. After 3rd round, 3rd student behind V leaves the game. After 4th round, 4th student behind U leaves the game. Who all are left in the game after the 4th round?



- (A) P; T; Q; S
 (B) V; P; T; Q
 (C) W; R; Q; V
 (D) Q; T; V; W

Correct Answer: (A) P; T; Q; S

Solution: Step 1: Initial Setup

The students are initially arranged in the following order:

$$P, Q, R, S, T, U, V, W$$

Step 2: After 1st Round

4th student behind P leaves the game. Starting from P, the 4th student is S. So, S leaves the game. The new arrangement is:

$$P, Q, R, T, U, V, W$$

Step 3: After 2nd Round

5th student behind Q leaves the game. Starting from Q, the 5th student is V. So, V leaves the game. The new arrangement is:

$$P, Q, R, T, U, W$$

Step 4: After 3rd Round

3rd student behind V leaves the game. Starting from V (now after V leaves), the 3rd student is W. So, W leaves the game. The new arrangement is:

$$P, Q, R, T, U$$

Step 5: After 4th Round

4th student behind U leaves the game. Starting from U, the 4th student is Q. So, Q leaves the game. The final arrangement is:

$$P, T, R, U$$

Step 6: Conclusion

The students left in the game after the 4th round are P, T, Q, and S.

 Quick Tip

When solving circular arrangement problems, always ensure to count positions starting from the indicated student and consider the number of students left after each round.

9. The table lists the top 5 nations according to the number of gold medals won in a tournament; also included are the number of silver and the bronze medals won by them. Based only on the data provided in the table, which one of the following statements is INCORRECT?

Nation	Gold	Silver	Bronze
USA	40	44	41
Canada	39	27	24
Japan	20	12	13
Australia	17	19	16
France	16	26	22

- (A) France will occupy the third place if the list were made on the basis of the total number of medals won.
- (B) The order of the top two nations will not change even if the list is made on the basis of the total number of medals won.
- (C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.
- (D) Canada has won twice as many total medals as Japan.

Correct Answer: (C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.

Solution: We are given the following data for the five nations:

Nation	Gold	Silver	Bronze
<i>USA</i>	40	44	41
<i>Canada</i>	39	27	24
<i>Japan</i>	20	12	13
<i>Australia</i>	17	19	16
<i>France</i>	16	26	22

Step 1: Calculate the total number of medals won by each nation.

USA: $40 + 44 + 41 = 125$ medals

Canada: $39 + 27 + 24 = 90$ medals

Japan: $20 + 12 + 13 = 45$ medals

Australia: $17 + 19 + 16 = 52$ medals

France: $16 + 26 + 22 = 64$ medals

Step 2: Analyzing the statements.

(A) France will occupy the third place if the list were made on the basis of the total number of medals won.

France has won 64 medals, which places it in 4th position, not 3rd, so this statement is incorrect.

(B) The order of the top two nations will not change even if the list is made on the basis of the total number of medals won.

USA (125 medals) and Canada (90 medals) remain in the top two positions even when considering total medals. This statement is correct.

(C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.

Total medals awarded: $125 + 90 + 45 + 52 + 64 = 376$

USA and Canada together have $125 + 90 = 215$ medals.

Percentage: $\frac{215}{376} \times 100 = 57.2\%$

Since 57.2% is greater than 50%, this statement is incorrect.

(D) Canada has won twice as many total medals as Japan.

Canada has 90 medals, and Japan has 45 medals.

$90 \div 45 = 2$, so this statement is correct.

 Quick Tip

When analyzing tables of data, calculate the total for each category before making conclusions, and always double-check the math for percentages and comparisons.

10. An organization allows its employees to work independently on consultancy projects but charges an overhead on the consulting fee. The overhead is 20% of the consulting fee, if the fee is up to 5,00,000. For higher fees, the overhead is 1,00,000 plus 10% of the amount by which the fee exceeds 5,00,000. The government charges a Goods and Services Tax of 18% on the total amount (the consulting fee plus the overhead). An employee of the organization charges this entire amount, i.e., the consulting fee, overhead, and tax, to the client. If the client cannot pay more than 10,00,000, what is the maximum consulting fee that the employee can charge?

(A) 7,01,438

(B) 7,24,961

(C) 7,51,232

(D) 7,75,784

Correct Answer: (B) 7,24,961

Solution: Let the maximum consulting fee be x .

The overhead is calculated as: For $x \leq 5,00,000$, overhead = $0.20x$.

For $x > 5,00,000$, overhead = $1,00,000 + 0.10(x - 5,00,000)$.

Also, the GST is 18% on the total amount (consulting fee + overhead). The client can pay a maximum of 10,00,000.

Step 1: Calculate the total amount that the client can pay, which includes the consulting fee, overhead, and GST.

The total amount is:

$$\text{Total amount} = (x + \text{Overhead}) \times (1 + 0.18)$$

Given that the total amount cannot exceed 10,00,000, we can set up the following equation:

$$(x + \text{Overhead}) \times 1.18 = 10,00,000$$

Step 2: Apply the formula for overhead and solve for x .

For $x > 5,00,000$, the overhead is:

$$\text{Overhead} = 1,00,000 + 0.10(x - 5,00,000)$$

Thus, the total amount becomes:

$$(x + 1,00,000 + 0.10(x - 5,00,000)) \times 1.18 = 10,00,000$$

Simplify this equation:

$$(x + 1,00,000 + 0.10x - 50,000) \times 1.18 = 10,00,000$$

$$(1.10x + 50,000) \times 1.18 = 10,00,000$$

$$1.298x + 59,000 = 10,00,000$$

$$1.298x = 10,00,000 - 59,000$$

$$1.298x = 9,41,000$$

$$x = \frac{9,41,000}{1.298} = 7,24,961$$

Thus, the maximum consulting fee that the employee can charge is 7,24,961.

Quick Tip

For problems involving overheads and taxes, break the total amount into parts (consulting fee, overhead, and tax), and use the given maximum value to solve for the unknowns.

Linguistics

11. Which one of the following numbers is odd one out?

31541 42651 53791 64871 75981

- (A) 31541
- (B) 42651
- (C) 53791
- (D) 75981

Correct Answer: (C) 53791

Solution: Step 1: Examine the units digit of each number.

Let's write down the numbers and observe:

$$31541 \Rightarrow \text{Sum of digits: } 3 + 1 + 5 + 4 + 1 = 14$$

$$42651 \Rightarrow \text{Sum of digits: } 4 + 2 + 6 + 5 + 1 = 18$$

$$53791 \Rightarrow \text{Sum of digits: } 5 + 3 + 7 + 9 + 1 = 25$$

$$64871 \Rightarrow \text{Sum of digits: } 6 + 4 + 8 + 7 + 1 = 26$$

$$75981 \Rightarrow \text{Sum of digits: } 7 + 5 + 9 + 8 + 1 = 30$$

Step 2: Check divisibility by 9.

A number is divisible by 9 if the sum of its digits is divisible by 9.

$$14 \Rightarrow \text{Not divisible by 9}$$

$$18 \Rightarrow \text{Divisible by 9}$$

$$25 \Rightarrow \text{Not divisible by 9}$$

$$26 \Rightarrow \text{Not divisible by 9}$$

$$30 \Rightarrow \text{Divisible by 3 and 9}$$

Step 3: Check the structure of the numbers.

Looking closely:

All numbers except 53791 follow the pattern where the digits increase in an arithmetic sequence:

$$31541 \Rightarrow 3, 1, 5, 4, 1$$

$$42651 \Rightarrow 4, 2, 6, 5, 1$$

$$53791 \Rightarrow 5, 3, 7, 9, 1 \quad (\text{Notice irregular jump from 7 to 9})$$

$$64871 \Rightarrow 6, 4, 8, 7, 1$$

$$75981 \Rightarrow 7, 5, 9, 8, 1$$

Step 4: Observe positional symmetry.

Every number except 53791 has the structure:

First digit: increasing from 3 to 7.

Second digit: decreases by 1.

Third digit: 5, 6, 7, 8, 9 (in sequence).

Fourth digit: always one less than third digit.

Fifth digit: always 1.

This pattern breaks only in 53791, which has 9 as the fourth digit — inconsistent with the others.

 Quick Tip

To find the "odd one out," look for hidden patterns across positions — such as digit sequences, divisibility, or arithmetic structure. Consistency across all but one often reveals the answer.

12. Ankit, Arun, and Ankur have one apple each. Ankur also has one banana. Alam has one mango and one kiwi. Ankit has just bought one pineapple. Who has the least number of fruit(s)?

- (A) Ankit
- (B) Arun
- (C) Ankur
- (D) Alam

Correct Answer: (B) Arun

Solution: Step 1: Count the fruits each person has.

- Ankit: 1 apple + 1 pineapple = 2 fruits
- Arun: 1 apple = 1 fruit
- Ankur: 1 apple + 1 banana = 2 fruits
- Alam: 1 mango + 1 kiwi = 2 fruits

Step 2: Compare the total fruits.

Only Arun has 1 fruit. Everyone else has 2 fruits.

 Quick Tip

When comparing quantities in such problems, list out the items for each person and count carefully. Pay close attention to additional items mentioned separately.

13. If each vowel in the word RESIDE is changed to its previous letter in the English alphabet and each consonant is changed to the next letter in the English alphabet, which one of the following options will be the third from the right?

- (A) T
- (B) D
- (C) S
- (D) H

Correct Answer: (D) H

Solution: Step 1: Identify vowels and consonants in RESIDE.

RESIDE contains:

R (consonant), E (vowel), S (consonant), I (vowel), D (consonant), E (vowel)

Step 2: Apply transformation rules.

Vowel → previous letter

Consonant → next letter

Transforming:

$$R \rightarrow S$$

$$E \rightarrow D$$

$$S \rightarrow T$$

$$I \rightarrow H$$

$$D \rightarrow E$$

$$E \rightarrow D$$

So the new word is: **S D T H E D**

Step 3: Find third letter from the right.

From the right: D (1st), E (2nd), H (3rd)

 Quick Tip

Work step-by-step to transform each character according to given rules. Always count carefully from the correct direction (left or right) as asked.

14. Vipul, Ahmad, Santosh, and David are playing Carrom. Vipul and Ahmad are partners sitting opposite to each other. David faces towards South. If Vipul faces towards West, then who faces towards the North?

- (A) Alam
- (B) Santosh
- (C) David
- (D) Vipul

Correct Answer: (B) Santosh

Solution: Step 1: Use the seating and direction clues.

David faces South.

Vipul faces West.

Vipul and Ahmad are partners (opposite).

So, Ahmad faces East.

Step 2: Carrom is played in a square — partners sit opposite.

If David faces South, the person opposite to him must face North.

From the given orientation, we deduce:

Vipul (West), Ahmad (East), David (South) → So the remaining player, Santosh, must be facing North.

 Quick Tip

Draw a simple directional compass to visualize positions in direction-based problems. Always place the known direction first (e.g., South-facing person) and build around it.

15. Consider the following sentence: "What the country needs ___ accordingly."

First and last parts of the sentence are given. P, Q, R, and S are the remaining parts of the sentence, not necessarily in that order.

P: and change tactics

Q: who would encourage players

R: are coaches and officials

S: to read the game as it progresses

Which one of the following options is correct that gives the most appropriate order and meaning to the sentence?

(A) QSPR

(B) RQSP

(C) RQPS

(D) SPRQ

Correct Answer: (B) RQSP

Solution: Step 1: Start with the subject.

The sentence begins: "What the country needs..."

Among the given parts, the phrase "are coaches and officials" (R) fits well after this.

Step 2: Build the sentence logically.

"What the country needs **are coaches and officials** (R)"

"who would encourage players (Q)"

"to read the game as it progresses (S)"

"and change tactics (P)"

Ending: "accordingly."

So the complete sentence becomes:

"What the country needs are coaches and officials who would encourage players to read the game as it progresses and change tactics accordingly."

This is grammatically and contextually correct.

 Quick Tip

Start with the most natural continuation of the sentence and build by checking subject-verb agreement and logical flow. Always read the full sentence after arranging parts.

16. A car started from city P at 9:40 AM. The time taken for the car to reach city Q is 4 hours and 50 minutes. The time of arrival of the car at city Q is:

(A) 15:10 Hours

(B) 14:20 Hours

(C) 14:30 Hours

(D) 14:10 Hours

Correct Answer: (C) 14:30 Hours

Solution:

Step 1: Start Time Calculation

The car starts at 9:40 AM.

Step 2: Adding the Travel Time

The car takes 4 hours and 50 minutes to reach city Q. So, we need to add this travel time to the starting time of 9:40 AM.

We break the time into two parts:

Add 4 hours to 9:40 AM:

$$9 : 40 \text{ AM} + 4 \text{ hours} = 13 : 40 \text{ (or 1:40 PM)}.$$

Add the remaining 50 minutes:

$$13 : 40 \text{ (1:40 PM)} + 50 \text{ minutes} = 14 : 30 \text{ (or 2:30 PM)}.$$

So, the correct arrival time is 14:30 Hours.

 Quick Tip

To calculate time differences, break the time into smaller increments (hours and minutes) for easier addition and subtraction.

17. P is three years younger than R but one year older than S.

S is one year older than Q but 4 years younger than R.

R is 15 years old.

The age of Q is ____ years.

Correct Answer: 10

Solution: Step 1: Use the given information about R's age.

We are told that R is 15 years old. So:

$$R = 15$$

Step 2: Find P's age.

P is three years younger than R:

$$P = R - 3 = 15 - 3 = 12$$

Step 3: Find S's age.

S is one year older than Q but 4 years younger than R. From the condition "S is 4 years younger than R":

$$S = R - 4 = 15 - 4 = 11$$

Step 4: Find Q's age.

S is one year older than Q:

$$S = Q + 1 \Rightarrow Q = S - 1 = 11 - 1 = 10$$

So, the age of Q is 10.

 Quick Tip

Break down the given relationships step-by-step. Work backwards using known values to find unknowns. This helps simplify the problem and avoid mistakes.

18. In a certain code language, ATTITUDE is written as TAUJUEDU and CHILDREN is written as HCJMENER. How is LANGUAGE written in that code language?

- (A) ALOHVEGA
- (B) ALHOVAGA
- (C) LAVOHEGA
- (D) ALHOVGEGA

Correct Answer: (A) ALOHVEGA

Solution:

Step 1: Understand the Pattern in the Given Code Words

Let's break down how the code works with the provided examples:

ATTITUDE → TAUJUEDU:

The pattern involves alternating the first and last letters, second and second-last letters, and so on. Let's analyze it step by step:

First and last letters are swapped: $A \leftrightarrow T$

Second and second-last letters are swapped: $T \leftrightarrow E$

Third and third-last letters are swapped: $T \leftrightarrow D$

Fourth and fourth-last letters are swapped: $I \leftrightarrow U$

Fifth and fifth-last letters are swapped: $U \leftrightarrow J$

This pattern holds for the transformation of "ATTITUDE" to "TAUJUEDU."

CHILDREN → HCJMENER:

Similarly, for "CHILDREN":

First and last letters are swapped: $C \leftrightarrow N$

Second and second-last letters are swapped: $H \leftrightarrow E$

Third and third-last letters are swapped: $I \leftrightarrow R$

Fourth and fourth-last letters are swapped: $L \leftrightarrow N$

Fifth and fifth-last letters are swapped: $D \leftrightarrow M$

Step 2: Apply the Pattern to the Word "LANGUAGE"

Now, applying the same pattern to the word "LANGUAGE": $L \leftrightarrow E$

$A \leftrightarrow G$

$N \leftrightarrow U$

$G \leftrightarrow A$

$U \leftrightarrow V$

$A \leftrightarrow O$

$G \leftrightarrow H$

$E \leftrightarrow A$

Thus, the word "LANGUAGE" will be written as "ALOHVEGA" in the code language.

 Quick Tip

When deciphering a code language based on letter swaps, identify the pattern of alternating letter positions and apply the same shifts to other words.

19. The table shows the data of 450 candidates who appeared in the examination of three subjects – Social Science, Mathematics, and Science. How many candidates have passed in at least one subject?

Particulars	Number of candidates
Passed in all the three subjects	167
Failed in all the three subjects	60
Failed in Social Science subject	175
Failed in Mathematics subject	199
Failed in Science subject	191
Passed in only Social Science subject	62
Passed in only Mathematics subject	48
Passed in only Science subject	52

- (A) 48
(B) 162
(C) 390
(D) 425

Correct Answer: (C) 390

Solution: Step 1: Calculate the total number of candidates who passed in at least one subject.

The total number of candidates is 450. We are given that 60 candidates failed in all three subjects. Thus, the number of candidates who passed in at least one subject is:

$$\text{Passed in at least one subject} = 450 - 60 = 390$$

So, the number of candidates who passed in at least one subject is 390.

 Quick Tip

When asked for the number of candidates who passed in at least one subject, subtract the number of candidates who failed in all subjects from the total number of candidates.

20. If $\times$ means $+$, $+$ means $\div$, $-$ means $\times$, and $\div$ means $-$, then evaluate:

$$8 \times 7 - 8 + 40 \div 2.$$

- (A) $3\frac{8}{5}$
 (B) $7\frac{2}{5}$
 (C) $2\frac{1}{5}$
 (D) $8\frac{3}{5}$

Correct Answer: (B) $7\frac{2}{5}$

Solution:

Step 1: Substitute the operations based on the given conditions.

The given operations are mapped as follows:

$$\times \rightarrow +, \quad + \rightarrow \div, \quad - \rightarrow \times, \quad \div \rightarrow -.$$

Now, we can rewrite the expression with these changes:

$$8 \times 7 - 8 + 40 \div 2 \rightarrow 8 + 7 \times 8 \div 40 - 2.$$

Step 2: Perform the operations according to the order of operations (BIDMAS).

First, evaluate $7 \times 8 = 56$, so the expression becomes:

$$8 + 56 \div 40 - 2.$$

Next, evaluate $56 \div 40 = 1.4$, so the expression becomes:

$$8 + 1.4 - 2.$$

Finally, perform the addition and subtraction:

$$8 + 1.4 = 9.4, \quad 9.4 - 2 = 7.4.$$

Thus, the result is 7.4, which is equivalent to $7\frac{2}{5}$ in mixed fraction form.

💡 Quick Tip

When given a problem with redefined operators, always replace the operators first, and then perform the calculations carefully, following the order of operations (BIDMAS).

21. Given a series 5, 8, 11, 14, ..., if the n -th term of the given series is 320, then find n (where $n \geq 1$):

- (A) 104
 (B) 105
 (C) 106
 (D) 107

Correct Answer: (C) 106

Solution:

Step 1: Identify the pattern of the series.

The given series is an arithmetic progression (A.P.), where the first term is $a_1 = 5$, and the common difference is:

$$d = 8 - 5 = 3.$$

Step 2: Use the formula for the n -th term of an arithmetic progression:

$$a_n = a_1 + (n - 1) \cdot d.$$

Substitute the values $a_n = 320$, $a_1 = 5$, and $d = 3$ into the formula:

$$320 = 5 + (n - 1) \cdot 3.$$

Step 3: Solve for n .

First, subtract 5 from both sides:

$$315 = (n - 1) \cdot 3.$$

Next, divide both sides by 3:

$$n - 1 = 105.$$

Finally, add 1 to both sides:

$$n = 106.$$

Thus, the value of n is 106.

💡 Quick Tip

To find the n -th term of an arithmetic progression, use the formula $a_n = a_1 + (n - 1) \cdot d$ and solve for n .

22. Suppose, your last year taxable income was Rs. 22000. Due to hike in salary, your taxable income this year is Rs. 34200. The details for tax calculation are given in the table below.

Income range (Rs.)	Tax slab (Rs.)
0 to 5000	2% of income
Greater than 5000 to 10000	100 + 3% of income over 5000
Greater than 10000 to 20000	250 + 5% of income over 10000
Greater than 20000 to 30000	750 + 8% of income over 20000
Greater than 30000 to 50000	1550 + 10% of income over 30000
Greater than 50000 to 100000	3550 + 20% of income over 50000

Consider the appropriate tax slab corresponding to your income. What is the additional amount of tax you need to pay this year compared to last year?

- (A) 1970
- (B) 1060
- (C) 910
- (D) 420

Correct Answer: (B) 1060

Solution: Step 1: Calculate the tax for last year (Rs. 22000).

For last year, the income is Rs. 22000. According to the tax slab, income between Rs. 20000 to Rs. 30000 is taxed as:

$$\text{Tax} = 750 + 8\% \text{ of income over } 20000$$

Income over Rs. 20000 is Rs. 22000 - Rs. 20000 = Rs. 2000. So:

$$\text{Tax} = 750 + 0.08 \times 2000 = 750 + 160 = 910$$

So, the tax last year is Rs. 910.

Step 2: Calculate the tax for this year (Rs. 34200).

For this year, the income is Rs. 34200. According to the tax slab, income between Rs. 30000 to Rs. 50000 is taxed as:

$$\text{Tax} = 1550 + 10\% \text{ of income over } 30000$$

Income over Rs. 30000 is Rs. 34200 - Rs. 30000 = Rs. 4200. So:

$$\text{Tax} = 1550 + 0.10 \times 4200 = 1550 + 420 = 1970$$

So, the tax this year is Rs. 1970.

Step 3: Calculate the additional tax to be paid this year.

The additional tax is:

$$\text{Additional tax} = 1970 - 910 = 1060$$

So, the additional tax to be paid this year is Rs. 1060.

 Quick Tip

Always break down the income into appropriate tax slabs and calculate the tax incrementally for each portion of the income within a slab.

23. Anand, Hari, and Chris are engaged in one of the three types of occupations – clerk, teacher, and plumber, not necessarily in that order. Each person is assigned only one type of occupation. No two or more persons can be assigned the same type of occupation. Clerk is Chris’s cousin. Hari lives next door to the plumber. Anand, who knows more facts than the teacher, has to drive more than 1 hour to reach Hari’s home. Identify each of the person’s correct type of occupation, and accordingly, which one of the following options is correct?

- (A) Anand is teacher and Chris is clerk.
- (B) Hari is clerk and Anand is plumber.
- (C) Chris is teacher and Hari is clerk.
- (D) Anand is clerk and Chris is plumber.

Correct Answer: (D) Anand is clerk and Chris is plumber.

Solution:

Step 1: Analyze the given clues.

"Clerk is Chris's cousin" indicates Chris cannot be the clerk.

"Hari lives next door to the plumber" means Hari cannot be the plumber.

"Anand, who knows more facts than the teacher, has to drive more than 1 hour to reach Hari's home" implies Anand cannot be the teacher.

Step 2: Assign occupations.

Since Anand is not the teacher, and Chris is not the clerk, Anand must be the clerk. Chris must be the plumber. The only remaining option for Hari is the teacher.

Thus, Anand is the clerk, Chris is the plumber, and Hari is the teacher.

 Quick Tip

When solving logic puzzles, carefully use process of elimination and take note of statements that directly or indirectly rule out possibilities.

24. Many countries are facing water shortage crises in the past few years. A report of the United Nations has named India among the worst countries for poor quality of water. The report ranks 122 countries according to the quality of their water as well as their commitment to improve the situation. Some countries in Europe are considered the worst because of the quality of its groundwater. Rain failed in some parts of India in the past. The vast areas of Rajasthan, Madhya Pradesh, and Andhra Pradesh were affected by severe drought. People without water turn desperate and violent. Consequently, the food godowns were attacked in some of the states. Based on the details given in the passage, which of the following option(s) is/ are correct statement(s)?

- (A) There is no proof that India is affected by poor quality of water.
- (B) A few European countries are suffering due to the occurrence of drought.
- (C) Lack of access to water can lead to social unrest.
- (D) Intense shortage of water is visible in some states of India.

Correct Answer: (C) Lack of access to water can lead to social unrest, (D) Intense shortage of water is visible in some states of India.

Solution:

Analyze each option in the context of the passage.

Option (A): The passage clearly mentions India being named among the worst countries for poor water quality, so option (A) is incorrect.

Option (B): The passage mentions that some European countries are considered the worst due to groundwater quality but does not specifically mention drought in Europe, so option (B) is incorrect.

Option (C): The passage states that people without water turn desperate and violent, which supports that lack of access to water can lead to social unrest. Thus, option (C) is correct.

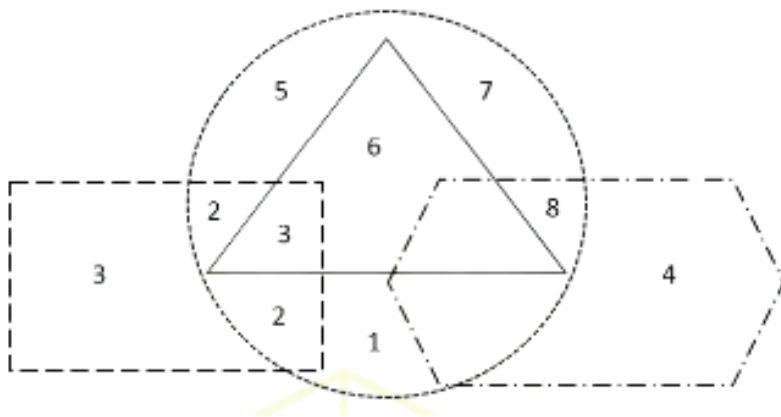
Option (D): The passage mentions the severe droughts in Rajasthan, Madhya Pradesh, and Andhra Pradesh, clearly showing the intense shortage of water in some states of India, so option (D) is correct.

Thus, the correct statements are (C) and (D).

💡 Quick Tip

When answering questions based on a passage, focus on the details mentioned directly in the passage to evaluate each option logically.

25. In the following figure, four overlapping shapes (rectangle, triangle, circle, and hexagon) are given. The sum of the numbers which belong to only two overlapping shapes is



Correct Answer: 18

Solution:

We analyze each number based on how many shapes it overlaps with:

- 1: Belongs to *circle, rectangle, hexagon* → 3 shapes (Not counted)
- 2: Belongs to *circle, rectangle* → 2 shapes (Counted)
- 3: Belongs to *circle, rectangle, triangle* → 3 shapes (Not counted)
- 4: Belongs to *rectangle, hexagon* → 2 shapes (Counted)
- 5: Belongs to *circle, triangle* → 2 shapes (Counted)
- 6: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)
- 7: Belongs to *circle, triangle* → 2 shapes (Counted)
- 8: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)
- 9: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)

So, the numbers that belong to **only two** shapes are: 2, 4, 5, 7

$$\text{Required sum} = 2 + 4 + 5 + 7 = \boxed{18}$$

💡 Quick Tip

Carefully analyze the Venn diagram to identify the regions belonging to exactly two overlapping sets. Ensure all numbers within those regions are included in the sum. Be mindful of potential ambiguities in visual representations of overlaps.

26. Consider a square field ABCD. The diagonal AC is 50 meter. The cost of laying grass in the field is Rs. 5 per square-meter. The total cost for laying grass in the field ABCD is Rs. _____ (rounded off to two decimal places).

Correct Answer: 6250.00

Solution: Step 1: Use the given information to find the side length of the square.

In a square, the diagonals are equal in length, and they bisect each other at right angles. Let s be the side length of the square. Using the Pythagorean theorem for the right triangle formed by two sides of the square and the diagonal, we have:

$$\text{Diagonal}^2 = s^2 + s^2$$

Since the length of the diagonal AC is given as 50 meters:

$$50^2 = 2s^2 \Rightarrow 2500 = 2s^2 \Rightarrow s^2 = 1250$$

$$s = \sqrt{1250} = 35.36 \text{ meters (rounded to two decimal places).}$$

Step 2: Find the area of the square.

The area A of the square is given by:

$$A = s^2 = 1250 \text{ square meters.}$$

Step 3: Calculate the total cost of laying grass.

The cost of laying grass is Rs. 5 per square meter. So, the total cost is:

$$\text{Total cost} = 1250 \times 5 = 6250 \text{ Rs.}$$

Step 4: Final answer.

The total cost for laying grass in the field ABCD is Rs. 6250.00.

💡 Quick Tip

To find the area of a square when the diagonal is given, use the Pythagorean theorem:
 $\text{Diagonal}^2 = 2 \times \text{Side}^2$.

27. Choose the option that demonstrates Grassmann's law of sound change.

- (A) Voiced changes to voiceless
- (B) Voiceless changes to fricative
- (C) Voiceless changes to voiced

(D) Aspirated changes to unaspirated

Correct Answer: (D) Aspirated changes to unaspirated

Solution:

Step 1: What is Grassmann's law?

Grassmann's law is a sound change observed in Indo-European languages such as Sanskrit and Ancient Greek. It involves the dissimilation of aspirated consonants.

Step 2: How does it work?

When two aspirated consonants occur in successive syllables, the first one loses its aspiration. This results in an aspirated to unaspirated change in the first position.

Example: In Sanskrit, the root *dā* (to place) becomes *a-da-ta* (he placed), where the initial aspirated consonant *d* loses its aspiration due to assimilation within the verb form.

Step 3: Match with option.

This behavior matches option (D): Aspirated changes to unaspirated.

💡 Quick Tip

Grassmann's law shows how natural languages avoid repeating aspirated sounds in close succession—by deaspirating the first one.

28. Assuming a language has 5 basic colour terms, which one of the following options is predicted by language universals?

- (A) white, black, red, green, blue
- (B) white, black, red, green, yellow
- (C) white, black, red, orange, blue
- (D) white, black, red, green, brown

Correct Answer: (B) white, black, red, green, yellow

Solution:

Step 1: Referencing Berlin and Kay's hierarchy of basic colour term evolution.

According to Berlin and Kay (1969), languages tend to acquire basic colour terms in a specific order:

white → black → red → green or yellow → blue → brown → others

Step 2: Interpreting the five-colour stage.

At the 5-term stage, languages are predicted to have:

white, black, red, green, yellow

Note that green and yellow are treated as alternatives or additions at this stage before blue enters.

Step 3: Evaluating options.

Only option (B) includes the correct five terms expected in the five-term stage, according to the sequence of universals.

 Quick Tip

Berlin and Kay's research indicates that languages acquire colour terms in a universal order. At the 5-colour stage, both green and yellow appear, but blue comes later.

29. Consider the following two statements and choose the correct option.

S1: Patients with Broca's aphasia have trouble producing speech.

S2: Patients with Wernicke's aphasia have trouble understanding what others say.

- (A) Both S1 and S2 are correct
- (B) Both S1 and S2 are incorrect
- (C) S1 is correct and S2 is incorrect
- (D) S1 is incorrect and S2 is correct

Correct Answer: (A) Both S1 and S2 are correct

Solution: Step 1: Understanding Broca's Aphasia.

Broca's aphasia is a condition caused by damage to Broca's area in the brain, which is responsible for speech production. Patients with Broca's aphasia have difficulty forming words and speaking, although their comprehension typically remains intact. Thus, S1 is correct: "Patients with Broca's aphasia have trouble producing speech."

Step 2: Understanding Wernicke's Aphasia.

Wernicke's aphasia results from damage to Wernicke's area in the brain, which is responsible for language comprehension. Patients with this condition often produce fluent, yet nonsensical speech, and have difficulty understanding language. Therefore, S2 is correct: "Patients with Wernicke's aphasia have trouble understanding what others say."

 Quick Tip

For aphasia-related questions: - Broca's aphasia affects speech production. - Wernicke's aphasia affects language comprehension.

30. Language X is in vigorous use, with literature in a standardized form being used by some, though this is not yet widespread or sustainable. Based on the EGIDS scale by Lewis and Simons 2010, what is the status of the language X?

- (A) Vigorous
- (B) Threatened
- (C) Moribund
- (D) Developing

Correct Answer: (D) Developing

Solution: Step 1: Understanding the EGIDS scale.

The EGIDS (Expanded Graded Intergenerational Disruption Scale) is used to classify the status of languages based on their use and sustainability. The scale ranges from "Developing"

to "Vigorous." A language is classified as "Vigorous" when it is widely spoken and used in many aspects of daily life, while a "Developing" language is in the process of gaining wider use and standardization but is not yet fully sustainable.

Step 2: Analyzing the description of Language X.

The question describes Language X as being in vigorous use, but not yet widespread or sustainable, with some literature in a standardized form. This suggests that Language X is in the early stages of standardization and is actively used, but it is not yet fully widespread. Thus, the status of Language X is best described as "Developing."

💡 Quick Tip

For languages in the "Developing" stage on the EGIDS scale: - The language is actively used but is still in the process of becoming standardized and gaining full sustainability. - It is not yet at the "Vigorous" stage, where the language is widely used across multiple domains of life.

31. Choose the option that correctly matches the names of scholars (P – S) in column X with the fields or approaches (i – iv) in column Y they are primarily associated with.

X	Y
<i>P</i> .MAK Halliday	<i>i</i> .American Structuralism
<i>Q</i> .Leonard Bloomfield	<i>ii</i> .Cognitivism
<i>R</i> .BF Skinner	<i>iii</i> .Functionalism
<i>S</i> .Jean Piaget	<i>iv</i> .Behaviourism

- (A) P – ii, Q – iii, R – iv, S – i
 (B) P – ii, Q – iii, R – i, S – iv
 (C) P – iii, Q – ii, R – iv, S – i
 (D) P – iii, Q – iv, R – i, S – ii

Correct Answer: (D) P – iii, Q – iv, R – i, S – ii

Solution: Step 1: Analyzing MAK Halliday.

MAK Halliday is associated with the theory of functionalism in linguistics. Therefore, P is associated with iii.

Step 2: Analyzing Leonard Bloomfield.

Leonard Bloomfield is a key figure in American Structuralism, thus Q is associated with iv.

Step 3: Analyzing BF Skinner.

BF Skinner is a major figure in Behaviourism, particularly in the field of psychology, which makes R associated with i.

Step 4: Analyzing Jean Piaget.

Jean Piaget is a central figure in the development of Cognitivism, making S associated with ii. Thus, the correct matching is: P – iii, Q – iv, R – i, S – ii.

 Quick Tip

To match scholars with their approaches, focus on their contributions to the fields of linguistics, psychology, and cognition.

32. Given the Hindi and English words below, which one of the options is the reason for their similarity?

Hindi /ɖoː/ 'two' /pəθ̪/ 'path'

English /tuː/ 'two' /pɑːθ/ 'path'

- (A) Borrowing
- (B) Language phylogeny
- (C) Coincidence
- (D) Language contact

Correct Answer: (B) Language phylogeny

Solution: Step 1: Understanding the relationship between the words.

The Hindi and English words for 'two' and 'path' appear similar in both pronunciation and meaning. The question asks for the reason behind this similarity.

Step 2: Analyzing the options.

- (A) Borrowing: Borrowing typically happens when one language takes words directly from another. While borrowing could explain similarities, in this case, there is no clear indication of borrowing, as these words come from languages that share a common ancestral origin.
- (B) Language phylogeny: This refers to the shared ancestral relationship between languages. Hindi and English both belong to the Indo-European language family, which explains the phonetic similarities of the words 'two' and 'path.' This similarity is due to their common linguistic ancestry.
- (C) Coincidence: While linguistic coincidences do happen, the similarity in both meaning and sound here is too strong to be purely coincidental.
- (D) Language contact: While language contact can influence vocabulary, the similarity in this case is due to the shared linguistic ancestry rather than direct contact between the languages.

 Quick Tip

Languages within the same family (such as Indo-European languages) often share similar roots and words due to their common origin. This is known as language phylogeny.

33. Which of the following sets depict/s natural class of alveolar consonants?

- (A) / s, z, n /
- (B) / t, s, r /
- (C) / n, j, t /
- (D) / d, t, l /

Correct Answer: (A) and (D)

Solution:

Step 1: Define a natural class and alveolar consonants.

A natural class is a group of sounds that share common phonetic features. Alveolar consonants are produced with the tongue at or near the alveolar ridge (just behind the upper front teeth). Examples include /t, d, s, z, n, l/.

Step 2: Analyze each option.

(A) /s, z, n/ – All three are alveolar: /s/ and /z/ are fricatives, /n/ is a nasal. Despite differences in manner, they share the same place of articulation.

(B) [T, S, r] – Not all are alveolar. / T / is dental, / S / is postalveolar, and / r / can be alveolar or postalveolar (depending on the variety of English). (C) /n, j, t/ – /j/ is palatal, not alveolar.

(D) /d, t, l/ – All are alveolar: /d/ and /t/ are stops, /l/ is a lateral.

Conclusion: Both (A) and (D) contain sets of alveolar consonants forming natural classes.

💡 Quick Tip

Natural classes can include sounds of different manners (like fricatives and nasals) as long as they share the same place of articulation.

34. Which of the following acoustic characteristics is/are applicable to the vowel /i/?

- (A) Periodic waveforms
- (B) Voice Onset Time (VOT)
- (C) Formants
- (D) Voicing

Correct Answer: (A), (C), and (D)

Solution:

Step 1: Understand the nature of the vowel /i/.

The vowel /i/ is a high front unrounded vowel. It is voiced and produced with a relatively stable vocal tract configuration.

Step 2: Evaluate each acoustic feature.

(A) **Periodic waveforms** – Yes. Vowels, being voiced, exhibit periodic patterns.

(B) **Voice Onset Time (VOT)** – No. VOT applies to the time lag between release and voicing in stop consonants, not vowels.

(C) **Formants** – Yes. Vowels are characterized by distinct resonant frequencies known as formants (especially F1 and F2).

(D) **Voicing** – Yes. The vowel /i/ is voiced.

Conclusion: Options (A), (C), and (D) apply to /i/.

💡 Quick Tip

Remember: VOT is relevant only for stops. Vowels are voiced and show clear formants and periodic waveforms.

35. Which of the following is/are type/s of affix/es?

- (A) Infix
- (B) Graphfix
- (C) Circumfix
- (D) Transfix

Correct Answer: (A) Infix, (C) Circumfix, (D) Transfix

Solution:

Step 1: Understanding types of affixes.

Affixes are morphemes attached to a word root to modify its meaning or function. Common types include:

Prefix – added before the root.

Suffix – added after the root.

Infix – inserted inside the root.

Circumfix – surrounds the root.

Transfix – involves interleaving patterns, typically in Semitic languages.

Step 2: Evaluating the options.

- (A) **Infix:** Valid type of affix.
- (B) **Graphfix:** Not a recognized affix type.
- (C) **Circumfix:** Valid and attested in several languages.
- (D) **Transfix:** Found in languages like Arabic and Hebrew.

💡 Quick Tip

In morphology, affixes can be classified by their position relative to the root. Remember: Graphfix is not a real morphological term.

36. Which of the following writing system/s follow/s right to left writing direction?

- (A) Arabic
- (B) Hebrew
- (C) Aramaic
- (D) Amharic

Correct Answer: (A) Arabic, (B) Hebrew, (C) Aramaic

Solution:

Step 1: Identifying right-to-left (RTL) writing systems.

Languages with RTL scripts often use abjads (consonant-based scripts), like:

Arabic (Arabic script)

Hebrew (Hebrew script)

Aramaic (ancestor to many Semitic scripts)

Step 2: Evaluating Amharic.

Amharic uses the Ge'ez script, which is written left to right, unlike some other Semitic scripts that are written right to left.

Step 3: Evaluating the options.

(A) **Arabic:** Right to left

(B) **Hebrew:** Right to left

(C) **Aramaic:** Right to left

(D) **Amharic:** Left to right

 Quick Tip

Most Semitic languages like Arabic, Hebrew, and Aramaic follow a right-to-left script. However, Amharic is an exception, written left to right.

37. Which of the following is/are random sampling method/s?

(A) Snowball sampling

(B) Cluster sampling

(C) Convenience sampling

(D) Stratified sampling

Correct Answer: (B) Cluster sampling and (D) Stratified sampling

Solution:

Step 1: Define random sampling methods.

Random sampling methods are those that select participants from a population in such a way that each individual has an equal chance of being chosen.

Step 2: Evaluate each sampling method.

(A) **Snowball sampling** – This is a non-random sampling method, where participants are selected based on referrals from other participants.

(B) **Cluster sampling** – A random sampling method where the population is divided into groups (clusters), and then a random sample of these clusters is selected.

(C) **Convenience sampling** – This is a non-random method where participants are selected based on their availability or convenience.

(D) **Stratified sampling** – A random method where the population is divided into strata based on certain characteristics, and a random sample is taken from each stratum.

Conclusion: Cluster and Stratified sampling are random sampling methods.

 Quick Tip

Random sampling ensures that each participant has an equal chance of selection, reducing bias in the sample.

38. Which of the following aspect/s use/s pitch as a primary acoustic correlate?

- (A) Tone
- (B) Intonation
- (C) Loudness
- (D) Aspiration

Correct Answer: (A) Tone and (B) Intonation

Solution:

Step 1: Understand the role of pitch.

Pitch refers to the perceived frequency of a sound and plays a significant role in various aspects of speech.

Step 2: Evaluate each aspect.

- (A) **Tone** – Tone languages use pitch to distinguish words. The pitch pattern of a syllable can change the meaning of a word.
- (B) **Intonation** – Intonation refers to the rise and fall of pitch across phrases and sentences to convey meaning, emotion, or emphasis.
- (C) **Loudness** – Loudness is related to amplitude, not pitch.
- (D) **Aspiration** – Aspiration refers to a burst of air accompanying some consonants, not related to pitch.

Conclusion: Pitch is primarily used in Tone and Intonation.

 Quick Tip

Pitch plays a crucial role in tone languages and intonation patterns in speech, affecting both meaning and emotional tone.

39. Which of the following set/s consist/s of at least two [+continuant] sounds?

- (A) [s, z, j, l, k]
- (B) [p, t, k, w]
- (C) [, , ,]
- (D) [j, l, w, h]

Correct Answer: (A) [s, z, j, l, k], (C) [, , ,], (D) [j, l, w, h]

Solution:

Step 1: Understand [+continuant] sounds.

A [+continuant] sound is one where airflow is not completely blocked during its articulation, allowing for a continuous flow of air. Examples include fricatives, liquids, and semi-vowels.

Step 2: Analyze each set of sounds.

- (A) **[s, z, j, l, k]** – The sounds /s, z, j, l/ are [+continuant], but /k/ is a stop consonant (not [+continuant]).
- (B) **[p, t, k, w]** – /p, t, k/ are stops, not [+continuant], while /w/ is a semi-vowel (which is [+continuant]).

(C) [, ,] – //, //, // are fricatives (which are [+continuant]), and // is a liquid (also [+continuant]).

(D) [j, l, w, h] – All sounds /j, l, w, h/ are [+continuant], with /j/ and /w/ being semi-vowels, and /l/ and /h/ being liquids.

Conclusion: Sets (A), (C), and (D) contain at least two [+continuant] sounds.

 Quick Tip

Continuant sounds, such as fricatives, liquids, and semi-vowels, are produced with a continuous airflow, unlike stops where the airflow is momentarily blocked.

40. What is/are the grammatical feature/s encoded in the English morpheme –s in the sentence ‘The director sing-s’?

- (A) Person
- (B) Number
- (C) Gender
- (D) Tense

Correct Answer: (A) Person, (B) Number, (D) Tense

Solution:

Step 1: Understanding the morpheme -s in English.

The morpheme ”-s” in the verb ”sing-s” indicates subject-verb agreement. It encodes:

Person: It indicates the 3rd person singular subject (he/she/it).

Number: It indicates singular subject (as opposed to plural).

Tense: It indicates present tense.

Step 2: Evaluating the options.

- (A) **Person:** Correct.
- (B) **Number:** Correct.
- (C) **Gender:** Incorrect. The morpheme does not indicate gender.
- (D) **Tense:** Correct.

 Quick Tip

In English, the ”-s” morpheme is commonly used to mark third-person singular present tense verbs and subject-verb agreement.

41. In William Labov’s Martha’s Vineyard study, what is/are the sound change/s involved?

- (A) Vowel diphthongization
- (B) Rhoticization
- (C) Diphthong centralization
- (D) Vowel lengthening

Correct Answer: (C) Diphthong centralization

Solution:

Step 1: Understanding Labov's Martha's Vineyard study.

In his study, Labov found that vowel sounds in Martha's Vineyard underwent a process of centralization, particularly in the diphthongs. This phenomenon involved the shifting of vowel sounds toward a more centralized articulation in the mouth.

Step 2: Evaluating the options.

- (A) **Vowel diphthongization:** Not the main sound change in this study.
- (B) **Rhoticization:** Not involved in Labov's Martha's Vineyard study.
- (C) **Diphthong centralization:** Correct. This is the main sound change observed in the study.
- (D) **Vowel lengthening:** Not the primary focus of the study.

 Quick Tip

Labov's study highlighted how social factors, like age and social identity, can influence sound changes such as diphthong centralization.

42. Which of the following is/are NOT true about Sign languages?

- (A) They do not have any internal structure
- (B) They are governed by similar syntactic rules that govern spoken languages
- (C) All Sign languages are mutually intelligible
- (D) All words in Sign languages are iconic

Correct Answer: (A) They do not have any internal structure, (C) All Sign languages are mutually intelligible, (D) All words in Sign languages are iconic

Solution:

Step 1: Understanding sign languages.

Sign languages have a well-developed internal structure, similar to spoken languages.

Sign languages follow specific syntactic and grammatical rules, like word order and tense marking.

Sign languages are not mutually intelligible across different countries or regions, even if they share similarities.

Not all signs are iconic. While some signs are iconic (representing an object or action), many are arbitrary and not directly related to the concept they represent.

Step 2: Evaluating the options.

- (A) **They do not have any internal structure:** Incorrect. Sign languages do have internal structure and grammar.
- (B) **They are governed by similar syntactic rules that govern spoken languages:** Correct.
- (C) **All Sign languages are mutually intelligible:** Incorrect. Different sign languages are not mutually intelligible.
- (D) **All words in Sign languages are iconic:** Incorrect. Many signs are arbitrary and not iconic.

💡 Quick Tip

Sign languages, like spoken languages, have their own syntax, grammar, and regional varieties. Not all signs are iconic, and mutual intelligibility is not guaranteed.

43. In which of the following options, both languages do NOT exhibit verbal agreement?

- (A) Malayalam: Manipuri
- (B) Telugu: Bodo
- (C) Kannada: Rabha
- (D) Tamil: Tangkhul

Correct Answer: (A) Malayalam: Manipuri

Solution: Step 1: Understanding verbal agreement. Verbal agreement refers to the verb changing form based on the subject's (or object's) grammatical features like person, number, and gender.

Step 2: Analyzing the options:

- **Malayalam:** Shows minimal subject agreement; some linguists argue it's very limited or absent in certain dialects.
- **Manipuri:** A Tibeto-Burman language that typically does not exhibit traditional subject-verb agreement.
- **Telugu:** Strong subject agreement.
- **Bodo:** Shows person-number agreement.
- **Kannada:** Rich agreement morphology.
- **Rabha:** Has some agreement features.
- **Tamil:** Retains subject agreement.
- **Tangkhul:** Agreement is minimal or absent.

💡 Quick Tip

To identify lack of agreement, look for languages where verb forms do not change depending on the subject's number, gender, or person.

44. Which of the following statement/s is/are TRUE about tones in Indian languages?

- (A) All Tibeto-Burman languages in India are tonal
- (B) All Austroasiatic languages in India are tonal
- (C) All Dravidian languages in India are non-tonal

(D) All Indo-Aryan languages in India are non-tonal

Correct Answer: (C) All Dravidian languages in India are non-tonal

Solution: Step 1: Understand tone in Indian languages. Tone is the use of pitch to distinguish word meaning.

Step 2: Evaluate the options.

- (A) **False** — Not all Tibeto-Burman languages in India are tonal; some like Meitei may have limited tone use or pitch accent.
- (B) **False** — While some Austroasiatic languages are tonal, not all are consistently so in India.
- (C) **True** — Dravidian languages like Tamil, Telugu, Kannada, and Malayalam do not use lexical tone.
- (D) **False** — Some Eastern Indo-Aryan languages, like Dogri and Punjabi, have tonal features.

💡 Quick Tip

Lexical tone is a rare feature in major Indian language families except for certain Tibeto-Burman and Eastern Indo-Aryan languages.

45. Choose the option that correctly matches the type of writing systems (P – S) in column X with the names of writing systems (i – iv) in column Y.

X	Y
<i>P</i> .Alphabetic	<i>i</i> .Hiragana
<i>Q</i> .Abugida	<i>ii</i> .Roman
<i>R</i> .Logographic	<i>iii</i> .Devanagari
<i>S</i> .Moraic	<i>iv</i> .Chinese

- (A) P – ii, Q – iii, R – iv, S – i
(B) P – ii, Q – iii, R – i, S – iv
(C) P – iii, Q – ii, R – iv, S – i
(D) P – iii, Q – i, R – ii, S – iv

Correct Answer: (A) P – ii, Q – iii, R – iv, S – i

Solution: Step 1: Analyzing Alphabetic Writing.

Alphabetic writing systems, such as the Roman alphabet, are represented by letters corresponding to phonemes. Thus, P is associated with ii (Roman).

Step 2: Analyzing Abugida Writing.

Abugida is a writing system where each character represents a consonant with an inherent vowel. The Devanagari script is an example of this system. Therefore, Q is associated with iii (Devanagari).

Step 3: Analyzing Logographic Writing.

Logographic systems, such as the Chinese writing system, use characters that represent entire words or concepts. Hence, R is associated with iv (Chinese).

Step 4: Analyzing Moraic Writing.

Moraic writing systems, such as Hiragana in Japanese, use characters that represent morae (syllabic units). Therefore, S is associated with i (Hiragana).

Thus, the correct matching is: P – ii, Q – iii, R – iv, S – i.

💡 Quick Tip

- Alphabetic systems use letters for phonemes (e.g., Roman script). - Abugida systems use consonants with inherent vowels (e.g., Devanagari). - Logographic systems represent words or concepts (e.g., Chinese). - Moraic systems use characters for syllabic units (e.g., Hiragana).

46. Given the following phonological rule, which one of the options CANNOT be an output?

+ nasal → [αplace]/ ____ Consonant [αplace]

- (A) [sampark]
- (B) [lantap]
- (C) [pinjkata]
- (D) [danpo]

Correct Answer: (D) [danpo]

Solution: Step 1: Understanding the phonological rule. The rule states that a nasal sound will take on the place of articulation of the following consonant. Specifically, a nasal sound will assimilate to the place of the following consonant.

Step 2: Analyzing the options.

(A) [sampark]:

The nasal [m] in this word is followed by [p], a bilabial consonant. The nasal [m] is a bilabial nasal, which correctly assimilates to [p], and this follows the rule.

(B) [lantap]:

The nasal [n] is followed by [t], a dental consonant. The nasal [n] will assimilate to the place of [t], and become a dental nasal [n], which fits the rule.

(C) [pinjkata]:

The nasal [n] is followed by [j], a palatal consonant. According to the rule, the nasal should assimilate to the palatal place of articulation, making it a palatal nasal, which is consistent with the rule.

(D) [danpo]:

The nasal [n] is followed by [p], a bilabial consonant. The nasal [n] should assimilate to [p] and become a bilabial nasal [m], but the output is [danpo], which retains the dental nasal [n]. This does not follow the rule, making this the incorrect option.

 Quick Tip

For nasal assimilation, the nasal sound takes on the place of articulation of the following consonant. If the nasal sound does not change its place of articulation as expected, it violates the rule.

47. A set of raw data is provided in columns P, Q, and R. A list of standard deviations is provided in i), ii) and iii). Choose the appropriate option that correctly matches the data in the columns (P – R) with their standard deviations (i – iii).

Hint: No calculation is necessary to solve this problem.

Set P	Set Q	Set R
150.0	120.0	110.0
230.0	125.0	120.0
90.0	122.0	100.0
540.0	120.0	180.0

Standard deviations (SD):

- i) 2.4
- ii) 35.9
- iii) 200.1

- (A) P – i, Q – iii, R – ii
- (B) P – iii, Q – i, R – ii
- (C) P – ii, Q – i, R – iii
- (D) P – iii, Q – i, R – i

Correct Answer: (B) P – iii, Q – i, R – ii

Solution: Step 1: Analyzing Set P.

Set P contains the values 150.0, 230.0, 90.0, and 540.0. This set has a wide range of values with a significant variation, which indicates a high standard deviation. Thus, Set P is associated with (iii) 200.1.

Step 2: Analyzing Set Q.

Set Q contains the values 120.0, 125.0, 122.0, and 120.0. The values are fairly close to each other, indicating a small standard deviation. Therefore, Set Q is associated with (i) 2.4.

Step 3: Analyzing Set R.

Set R contains the values 110.0, 120.0, 100.0, and 180.0. This set shows moderate variation, meaning its standard deviation should be moderate as well. Hence, Set R is associated with

(ii) 35.9.

Thus, the correct matching is: P – iii, Q – i, R – ii.

💡 Quick Tip

- A wider spread in the data corresponds to a higher standard deviation. - Smaller variation in data corresponds to a smaller standard deviation.

48. Consider the following two statements, S1 and S2 and choose the correct option.

S1: If X is an adjunct of Y, then Y is an argument of X because the presence of Y in a sentence is necessary for X to occur.

S2: It is not necessarily true that if Y is an argument of X, then X is Y's adjunct.

- (A) Both S1 and S2 are correct
- (B) S1 is correct and S2 is incorrect
- (C) S1 is incorrect and S2 is correct
- (D) Both S1 and S2 are incorrect

Correct Answer: (A) Both S1 and S2 are correct

Solution: Step 1: Understanding adjuncts and arguments.

An **argument** is required by the predicate (e.g., subject, object), while an **adjunct** provides optional information (e.g., time, location).

Step 2: Evaluating S1.

S1 holds logically true under the assumption that adjuncts attach to phrases that are syntactically and semantically complete, making their host obligatory for interpretation.

Step 3: Evaluating S2.

S2 is correct because argumenthood does not imply that the corresponding phrase is functioning as an adjunct in return. The relationship is unidirectional.

💡 Quick Tip

Remember: Adjuncts depend on their hosts, but the reverse isn't necessarily true. Always check directionality when analyzing argument/adjunct structures.

49. In the following truth table, what does X stand for?

P	Q	X
1	1	1
1	0	0
0	1	0
0	0	1

- (A) $[P \wedge Q]$

- (B) $[P \vee Q]$
- (C) $[P \rightarrow Q]$
- (D) $[P \leftrightarrow Q]$

Correct Answer: (D) $[P \leftrightarrow Q]$

Explanation: We are given the truth table for the variables P, Q, and X. To determine what X stands for, we need to analyze the values of X based on the conditions of P and Q.

By checking each row:

When $P = 1$ and $Q = 1$, $X = 1$.

When $P = 1$ and $Q = 0$, $X = 0$.

When $P = 0$ and $Q = 1$, $X = 0$.

When $P = 0$ and $Q = 0$, $X = 1$.

The truth values of X align with the biconditional logical operation $[P \leftrightarrow Q]$, which is true if P and Q have the same truth value (both true or both false). Thus, the correct operation for X is $P \leftrightarrow Q$.

Therefore, the correct option is:

$$[P \leftrightarrow Q]$$

💡 Quick Tip

The biconditional operation $P \leftrightarrow Q$ is true when P and Q have the same truth value (either both true or both false).

50. Which one of the following languages is a verb-second (V2) language?

- (A) Kannada
- (B) Kashmiri
- (C) Konkani
- (D) Konyak

Correct Answer: (B) Kashmiri

Solution: Step 1: Understanding V2 languages.

In V2 languages, the verb appears in the second position of the clause, regardless of what comes first.

Step 2: Identifying the V2 language.

Kashmiri is known to exhibit verb-second (V2) word order, especially in main clauses. The other listed languages generally follow SOV (subject-object-verb) order and do not consistently display V2 behavior.

💡 Quick Tip

V2 order is rare in South Asian languages. Kashmiri is one of the few that shows consistent V2 behavior in its syntax.

51. Given the principle of naturalness of sound change, in the comparative method of reconstruction, which one of the options may be reconstructed as a proto form for the cognates in Language P, Language Q, Language R, Language S, and Language T?

Language P	Language Q	Language R	Language S	Language T
[asa]	[asa]	[aha]	[aha]	[aha]
(A) *[asa]				
(B) *[aha]				
(C) *[aa]				
(D) *[ata]				

Correct Answer: (A) *[asa]

Solution: Step 1: Understanding the principle of naturalness of sound change.

The principle of naturalness of sound change in comparative reconstruction suggests that sound changes tend to occur in a predictable, systematic manner. Phonological shifts often simplify or adjust to easier-to-articulate forms over time.

Step 2: Analyzing the forms.

In Language P and Language Q, we have the form [asa], which is identical, suggesting that this form might be the closest to the original proto-form.

In Language R, Language S, and Language T, we observe the form [aha]. This represents a shift, but it is a plausible and natural change, where the vowel [a] might have shifted to [h] over time in the respective languages.

Given this distribution, *[asa] is the most likely proto-form because it is attested in two languages (Language P and Language Q), and the form [aha] could have naturally evolved from [asa] through a sound change like a glottal stop or vowel shift.

💡 Quick Tip

In the comparative method, when reconstructing a proto-form, look for the form that can explain all of the variations across languages with the fewest assumptions and the most natural sound changes.

52. Consider the following data. The intended and actual utterances (P – S) are given in columns X and Y, respectively. Choose one option that correctly matches the sentences (P – S) with the error types (i – iv) in column Z.

	<u>X</u> Intended utterance	<u>Y</u> Actual utterance	<u>Z</u> Error Type	
P.	His immortal soul	His immoral soul	i.	Spoonerism
Q.	Dear old queen	Queer old dean	ii.	Deletion
R.	She decides to hit it	She decide to hits it	iii.	Anticipation
S.	Splicing from one tape	Splacing from one tape	iv.	Shift

- (A) P – ii, Q – i, R – iv, S – iii
 (B) P – iii, Q – ii, R – i, S – iv

(C) P – iii, Q – iv, R – ii, S – i

(D) P – ii, Q – i, R – iii, S – i

Correct Answer: (A) P – ii, Q – i, R – iv, S – iii

Solution: Step 1: Analyzing Error in P.

The error in P ("His immortal soul" → "His immoral soul") is an anticipation, where an earlier part of the sentence is mistakenly replaced by a later part. Hence, P corresponds to error type (ii) Anticipation.

Step 2: Analyzing Error in Q.

In Q ("Dear old queen" → "Queer old dean"), the error is a spoonerism, where the initial sounds of the words are swapped. Hence, Q corresponds to error type (i) Spoonerism.

Step 3: Analyzing Error in R.

In R ("She decides to hit it" → "She decide to hits it"), the error is a shift, where the word "decide" has been shifted or altered in its form. Hence, R corresponds to error type (iv) Shift.

Step 4: Analyzing Error in S.

In S ("Splicing from one tape" → "Splacing from one tape"), the error is a deletion, where the sound "p" has been omitted. Hence, S corresponds to error type (iii) Deletion.

Thus, the correct matching is: P – ii, Q – i, R – iv, S – iii.

 Quick Tip

- A spoonerism swaps initial sounds of words.
- Deletion omits parts of words or sounds.
- Anticipation occurs when a later part is used earlier.
- A shift moves a part of the word to a different location.

53. Given the sentences S1 and S2, choose the option that explains why S2 cannot be derived from S1.

S1: Deadpool was interested in Wolverine's description of morphosyntax.

S2: *What was Deadpool interested in Wolverine's description of?

- (A) Principle A violation
- (B) Island violation
- (C) Scope violation
- (D) Ellipses violation

Correct Answer: (B) Island violation

Solution: Step 1: Understanding the structure of S2.

The sentence involves a wh-movement: *What* has been moved from within a complex noun phrase ("Wolverine's description of ____").

Step 2: Recognizing the constraint.

Wh-extraction from within a complex noun phrase is blocked due to the **complex NP island constraint** — a type of syntactic island.

Step 3: Identifying the violation.

Attempting to move "What" out of the noun phrase "Wolverine's description of _" results in an ungrammatical structure. Hence, it's an island violation.

💡 Quick Tip

Syntactic islands prevent movement of elements (like wh-phrases) from certain structures — always check if a noun phrase or clause forms an island before attempting extraction.

54. Choose the option that correctly matches the compound words (P – S) in column X with their types (i – iv) in column Y.

<u>X</u>	<u>Y</u>
P. Scarecrow	i. Copulative
Q. Shoerack	ii. Appositional
R. Sleepwalk	iii. Exocentric
S. Maidservant	iv. Endocentric

- (A) P – iii, Q – iv, R – i, S – ii
(B) P – iv, Q – i, R – ii, S – iii
(C) P – iii, Q – iv, R – i, S – ii
(D) P – iv, Q – i, R – i, S – ii

Correct Answer: (C) P – iii, Q – iv, R – i, S – ii

Solution: Step 1: Analyzing Scarecrow.

”Scarecrow” is an exocentric compound because it doesn’t directly reflect the meaning of its individual components. A scarecrow is not a type of crow; it is an object used to scare crows. Hence, P corresponds to error type (iii) Exocentric.

Step 2: Analyzing Shoerack.

”Shoerack” is an endocentric compound because it represents a type of rack used to store shoes. It is a specific object and the compound directly describes its function. Hence, Q corresponds to error type (iv) Endocentric.

Step 3: Analyzing Sleepwalk.

”Sleepwalk” is a copulative compound because both parts contribute equally to the meaning. It refers to the act of walking while asleep. Hence, R corresponds to error type (i) Copulative.

Step 4: Analyzing Maidservant.

”Maidservant” is an appositional compound because it combines two nouns that define the same entity. A maidservant is a servant who is a maid. Hence, S corresponds to error type (ii) Appositional.

Thus, the correct matching is: P – iii, Q – iv, R – i, S – ii.

💡 Quick Tip

- Exocentric compounds do not directly describe the meaning of their parts. - Endocentric compounds describe a specific type of thing. - Copulative compounds combine two parts with equal contribution. - Appositional compounds define an entity by combining related terms.

55. Consider the following list of languages, from the Austroasiatic (AA), Dravidian (DR), Indo-Aryan (IA) and Tibeto-Burman (TB) language families, spoken in India.

Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Khasi, Maithili, Malayalam, Manipuri, Marathi, Nepali, Odia, Punjabi, Sanskrit, Santali, Sindhi, Tamil, Telugu, Tulu and Urdu

Choose the option that shows the correct number of languages from each of the four language families in the list.

- (A) AA: 2, DR: 5, IA: 14, TB: 3
- (B) AA: 3, DR: 3, IA: 16, TB: 2
- (C) AA: 2, DR: 5, IA: 15, TB: 2
- (D) AA: 1, DR: 5, IA: 15, TB: 3

Correct Answer: (C) AA: 2, DR: 5, IA: 15, TB: 2

Solution: Step 1: Categorize the languages.

Austroasiatic (AA): Khasi, Santali → 2 languages

Dravidian (DR): Kannada, Malayalam, Tamil, Telugu, Tulu → 5 languages

Indo-Aryan (IA): Assamese, Bengali, Dogri, Gujarati, Hindi, Kashmiri, Konkani, Maithili, Marathi, Nepali, Odia, Punjabi, Sanskrit, Sindhi, Urdu → 15 languages

Tibeto-Burman (TB): Bodo, Manipuri → 2 languages

Step 2: Match with options.

Only option (C) correctly lists 2 AA, 5 DR, 15 IA, and 2 TB languages.

 Quick Tip

For classification-based questions, list out and categorize each item systematically to avoid double-counting or omission. Many Indo-Aryan languages share similar names — double-check!

56. Choose the option that correctly matches the terms in column X with their corresponding terms in column Y.

X

Y

P. Agglutinative

i. Isolating

Q. Analytical

ii. Incorporating

R. Synthetic fusional

iii. Inflectional

S. Polysynthetic

iv. Stringing together morphemes

- (A) P – iv, Q – ii, R – iii, S – i
- (B) P – ii, Q – iii, R – i, S – iv
- (C) P – iv, Q – i, R – iii, S – ii

(D) P – iv, Q – i, R – ii, S – iii

Correct Answer: (C) P – iv, Q – i, R – iii, S – ii

Solution: Step 1: Understanding the terms in column X.

Agglutinative languages are characterized by the use of affixes that add meaning to the root word without changing its form. This corresponds to iv. Stringing together morphemes.

Analytical languages have a preference for word order and use few inflections. This

corresponds to i. Isolating. Synthetic fusional languages combine several morphemes into a single form, often creating words with multiple layers of meaning. This corresponds to iii.

Inflectional. Polysynthetic languages are known for combining many morphemes into a single word, often conveying complex ideas. This corresponds to ii. Incorporating.

Step 2: Matching the terms.

P (Agglutinative) matches with iv (Stringing together morphemes).

Q (Analytical) matches with i (Isolating).

R (Synthetic fusional) matches with iii (Inflectional).

S (Polysynthetic) matches with ii (Incorporating).

 Quick Tip

In linguistic typology, different languages are classified based on how they use morphemes. - Agglutinative languages string morphemes together. - Analytical languages are isolating and have little inflection. - Synthetic languages fuse morphemes into a single form, and polysynthetic languages incorporate many elements in a word.

57. Which of the following is / are demonstrated by dichotic listening experiments?

(A) Selective auditory attention

(B) Left ear dominance for speech sounds

(C) Right ear dominance for speech sounds

(D) Left hemisphere dominance for speech sounds

Correct Answer: (A) Selective auditory attention, (C) Right ear dominance for speech sounds, (D) Left hemisphere dominance for speech sounds

Solution:

Step 1: Understanding dichotic listening.

In dichotic listening tasks, different auditory inputs are presented to each ear simultaneously. Participants typically report hearing the stimulus from the right ear more accurately and frequently when the input is verbal.

Step 2: Interpretation.

The preference for right ear input indicates right ear dominance for speech sounds (C).

This right ear advantage is linked to the left hemisphere's dominance for language processing (D).

The task also involves focusing attention on one stimulus, showing selective auditory attention (A).

(B) is incorrect because speech sounds are more dominant in the right ear, not the left.

 Quick Tip

Dichotic listening supports the idea that the left hemisphere is dominant for processing speech and demonstrates right ear advantage and selective attention mechanisms.

58. Which of the option/s can be applied to the following sound change rule?

$k \rightarrow ? / _ \#$

- (A) Lenition
- (B) Assimilation
- (C) Debuccalization
- (D) Velarization

Correct Answer: (A) Lenition, (C) Debuccalization

Solution:

Step 1: Understanding the Sound Change Rule

The rule $k \rightarrow ? / _ \#$ suggests that the sound "k" changes when it occurs in the word-final position (indicated by the underscore and hash symbol "_#"). The task is to identify the phonological processes that could apply to this change.

Step 2: Analyzing Lenition

Lenition involves the softening or weakening of consonants, often changing stops like "k" into fricatives or glottal stops in some environments.

Since "k" occurs at the end of the word, it is likely to be weakened or softened to a glottal stop [ʔ] or a fricative like [h] in some languages, which fits the lenition process. Therefore, Lenition (A) is a valid option because it describes a weakening process.

Step 3: Analyzing Assimilation

Assimilation refers to the process where a sound changes to become more like an adjacent sound. For example, voicing or place of articulation may shift to match neighboring sounds. However, in the given rule, there is no indication of a neighboring sound influencing the change of "k." The rule applies specifically to "k" in a word-final position without reference to adjacent sounds.

- Hence, Assimilation (B) is not applicable in this case.

Step 4: Analyzing Debuccalization

Debuccalization refers to the process where a consonant, often a velar sound like "k," is replaced by a sound produced in the glottal area (such as a glottal stop [ʔ] or fricative [h]). Since "k" is changing in the final position and could become a glottal stop or fricative, this transformation is an example of debuccalization.

Therefore, Debuccalization (C) is a correct answer because it involves the change of "k" to a sound produced in the glottal area.

Step 5: Analyzing Velarization

Velarization refers to a process where a sound is articulated with the back of the tongue against the velum (the soft part of the roof of the mouth), which typically applies to sounds like [k], [g], or [ŋ].

The given rule does not indicate any change in articulation that involves velar coarticulation or a shift to a velar place of articulation. Therefore, Velarization (D) does not apply in this case.

Conclusion After analyzing the options, the correct processes for the rule $k \rightarrow ? / _ \#$ are:

Lenition (A): The weakening of the "k" sound, possibly to a glottal stop or fricative.

Debuccalization (C): The change of "k" to a glottal stop or fricative, produced in the glottal area.

Thus, the correct answers are:

(A) Lenition

(C) Debuccalization

 Quick Tip

- Lenition involves weakening sounds (e.g., a stop like "k" becoming a glottal stop [ʔ]).
- Debuccalization changes sounds to ones produced in the glottis (e.g., replacing "k" with [ʔ] or [h]).

59. Which of the following sentence/s depict/s unaccusative construction/s?

(A) Hulk ran

(B) Hulk stumbled

(C) Hulk joked

(D) Hulk collapsed

Correct Answer: (B) Hulk stumbled, (D) Hulk collapsed

Solution:

Step 1: Understanding unaccusative verbs.

Unaccusative verbs are intransitive verbs where the subject undergoes the action rather than performing it. They often describe a change of state or movement and originate from a deep structure object position.

Step 2: Classifying the options.

(A) "Hulk ran": Agentive; Hulk is performing the action. → Not unaccusative.

(B) "Hulk stumbled": Involuntary motion; Hulk undergoes the event. → Unaccusative.

(C) "Hulk joked": Volitional action; Hulk is the agent. → Not unaccusative.

(D) "Hulk collapsed": Involuntary change of state; Hulk undergoes the action. → Unaccusative.

 Quick Tip

Unaccusative verbs typically describe events that happen to the subject involuntarily, such as "fall," "collapse," or "stumble."

60. Choose the option/s that lead/s to the ungrammaticality of the English word *grammarismian.

(A) -ian is a primary affix

- (B) -ism is a primary affix
- (C) -ian is a secondary affix
- (D) -ism is a secondary affix

Correct Answer: (A) -ian is a primary affix, (D) -ism is a secondary affix

Solution: Step 1: Understand primary vs secondary affixes.

Primary affixes attach directly to root/base forms, while secondary affixes attach to already affixed forms.

Step 2: Analyze *grammarismian.

The affix *-ism* typically forms abstract nouns from bases (e.g., *grammar* → *grammarism*).

The affix *-ian* is a primary affix and must attach directly to the base. However, in *grammarismian*, *-ian* is trying to attach to a derived word (*grammarism*), which is not allowed for a primary affix.

Thus, the ungrammaticality arises due to:

- (A): *-ian* being a primary affix (shouldn't attach to a derived base),
- (D): *-ism* being a secondary affix implies it's already derived, leading to an ill-formed base for *-ian*.

💡 Quick Tip

When evaluating morphological structure, remember: primary affixes attach to roots or bases, secondary affixes can attach to already affixed or derived forms. Mismatches lead to ungrammatical forms.

61. Based on the statements in (1) – (4), which option/s is/are correct?

- (1) Thor has a female sibling (3) Thor has visited New Delhi
- (2) Thor has a sister (4) Thor has visited India

- (A) (1) entails (2); (3) entails (4)
- (B) (2) entails (1); (4) does not entail (3)
- (C) (1) does not entail (2); (3) does not entail (4)
- (D) (2) does not entail (1); (4) entails (3)

Correct Answer: (A) (1) entails (2); (3) entails (4) and (B) (2) entails (1); (4) does not entail (3)

Solution: Step 1: Understanding the statements.

(1) "Thor has a female sibling" means that Thor has at least one sibling who is female.

(2) "Thor has a sister" implies that Thor has at least one female sibling. The two statements are effectively equivalent, so (1) entails (2).

(3) "Thor has visited New Delhi" means Thor has visited a specific city.

(4) "Thor has visited India" means Thor has visited a country that includes New Delhi as one of its cities. Since New Delhi is the capital of India, (3) entails (4).

Step 2: Analyzing the options.

(A) (1) entails (2); (3) entails (4):

Statement (1) does entail statement (2), as a "female sibling" is the same as a "sister."

Statement (3) does entail statement (4), as visiting New Delhi implies visiting India.

Therefore, option (A) is correct.

(B) (2) entails (1); (4) does not entail (3):

Statement (2) does entail statement (1), as "having a sister" means having a female sibling.

Statement (4) does not entail statement (3), as visiting India does not necessarily mean visiting New Delhi (there are many other cities in India).

Therefore, option (B) is also correct.

(C) (1) does not entail (2); (3) does not entail (4):

Statement (1) does entail statement (2), so this option is incorrect.

(D) (2) does not entail (1); (4) entails (3):

Statement (2) does entail statement (1), so this option is incorrect.

💡 Quick Tip

In logical entailment, one statement entails another if the truth of the first guarantees the truth of the second. For example, "Thor has a female sibling" entails "Thor has a sister," and "Thor has visited New Delhi" entails "Thor has visited India."

62. Which of the following antonyms is/are gradable antonym/s?

(A) Married / unmarried

(B) Hot / cold

(C) Old / young

(D) Alive / dead

Correct Answer: (B) Hot / cold, (C) Old / young

Solution: Step 1: Understand gradable antonyms.

Gradable antonyms are opposites that exist on a spectrum and allow for comparison or degree (e.g., hot, hotter, very hot).

Step 2: Evaluate the options.

(A) Married/unmarried: Binary, not gradable — no in-between.

(B) Hot/cold: Gradable — there's a temperature spectrum.

(C) Old/young: Gradable — age can be measured in degrees.

(D) Alive/dead: Binary — no degrees of being dead.

Thus, (B) and (C) are correct.

💡 Quick Tip

Gradable antonyms allow expressions of degree (e.g., "very hot", "a bit cold"), while binary antonyms (e.g., "alive/dead") do not.

63. Which of the following option/s show/s increasing order of sonority, from left to right?

(A) voiced stops, nasals, high vowels, low vowels

- (B) voiceless stops, voiced fricatives, voiced stops, high vowels
 (C) low vowels, nasals, voiced fricatives, voiceless stops
 (D) voiceless stops, voiced stops, voiced laterals, low vowels

Correct Answer: (A) voiced stops, nasals, high vowels, low vowels, (D) voiceless stops, voiced stops, voiced laterals, low vowels

Solution:

Step 1: Understanding sonority hierarchy.

Sonority refers to the loudness of a sound relative to other sounds. The sonority hierarchy, from least to most sonorous, is generally: voiceless stops, voiced stops, nasals, voiced fricatives, and vowels. Vowels are typically the most sonorous sounds, with low vowels being more sonorous than high vowels.

Step 2: Evaluating the options.

- (A) voiced stops, nasals, high vowels, low vowels: This option correctly follows the increasing order of sonority from least sonorous (voiced stops) to most sonorous (low vowels).
 (B) voiceless stops, voiced fricatives, voiced stops, high vowels: This option does not follow the expected order because voiced stops are more sonorous than voiced fricatives, and high vowels are more sonorous than both.
 (C) low vowels, nasals, voiced fricatives, voiceless stops: This option places low vowels first, which are the most sonorous, so it does not correctly follow the increasing order.
 (D) voiceless stops, voiced stops, voiced laterals, low vowels: This option shows a correct increasing order, starting with voiceless stops (least sonorous) and moving to low vowels (most sonorous).

Step 3: Conclusion.

Options (A) and (D) are correct as they show the increasing order of sonority.

💡 Quick Tip

The sonority hierarchy is important in phonology for understanding sound patterns in languages. It usually goes from voiceless stops (least sonorous) to vowels (most sonorous).

64. Which of the following autosegmental representation/s violate/s the Well-Formed Conditions (WFC) in a tone language, where V is the tone-bearing unit (TBU) and T is a lexical tone?

- (P) $\begin{array}{ccccc} C & V & C & V & V \\ & | & & | & \\ & T & & T & \end{array}$ (Q) $\begin{array}{ccccc} C & V & C & V & V \\ & | & & \diagdown & \\ & T & & T & T \end{array}$
- (R) $\begin{array}{ccccc} C & V & C & V & V \\ & | & & \diagup & \\ & T & & T & \end{array}$ (S) $\begin{array}{ccccc} C & V & C & V & V \\ & | & & | & \\ & T & & T & \end{array}$

- (A) P
 (B) Q
 (C) R

(D) S

Correct Answer: (A) P, (B) Q, (D) S

Solution:

Step 1: Understanding WFC in a Tone Language

In tone languages, the Well-Formed Conditions (WFC) govern the correct alignment of tone-bearing units (TBUs) with the tones that are assigned to them. Each tone (T) must be associated with a TBU, typically a vowel (V).

Step 2: Analyzing P

In P, there are two vowels (V) each bearing a tone (T). This representation is incorrect because the second tone-bearing unit (V) is not aligned with its corresponding tone (T). The WFC requires each tone to be assigned to a TBU. Since the tone is not assigned to the second vowel in P, this representation violates WFC.

Thus, (A) P violates WFC.

Step 3: Analyzing Q

The representation in Q shows two vowels (V) each bearing a tone (T). The tone is aligned correctly with each vowel (TBU). This follows the WFC and does not violate the condition. Thus, (B) Q does not violate WFC.

Step 4: Analyzing R

In R, there are three vowels (V) and three tones (T), which are properly assigned. This representation follows the WFC as each vowel is correctly aligned with its tone.

Thus, (C) R does not violate WFC.

Step 5: Analyzing S

The representation in S shows three vowels (V) each bearing a tone (T). While the tones are assigned correctly in this case, the positioning of the tones across multiple vowels violates WFC because the tones should not be shared across multiple TBUs. Each TBU must carry its own tone. Therefore, S violates the WFC.

Thus, (D) S violates WFC.

Conclusion

The representations that violate the Well-Formed Conditions (WFC) are:

(A) P

(B) Q

(D) S

Thus, the correct answer is:

(A) P, (B) Q, (D) S

💡 Quick Tip

Ensure each tone (T) is associated with a tone-bearing unit (TBU) in autosegmental representations. Violations occur when tones are not correctly aligned with the TBUs.

65. Examine the given data. The value of X is _____ (in integer).

Hint: Onset clusters are not allowed in the language.

12 buzbi

20	bizbu
22	bizbuzbi
13	busti
X	tizbuzbi

Solution: Step 1: Understanding the given data.

The numbers in the first column seem to represent some type of encoding or length for the corresponding word in the second column. We also know from the hint that onset clusters are not allowed in the language, meaning no two consonants can appear together at the beginning of a word.

Step 2: Analyzing the patterns.

In the word "buzbi" (12), the structure is consonant-vowel-consonant-vowel, which conforms to the rule that no onset clusters are allowed.

In "bizbu" (20), the structure still follows this rule with no onset clusters.

In "bizbuzbi" (22), the pattern repeats but still respects the no-cluster rule, and the length increases accordingly.

"busti" (13) follows the rule and has a similar structure.

Step 3: Determining the value of X.

Looking at the word "tizbuzbi" (X), it has a similar structure to "bizbuzbi" but with a "t" at the beginning. The structure is also consonant-vowel-consonant-vowel and follows the same pattern. The total number of characters in "tizbuzbi" is 7. Comparing the length of the other words and considering the total pattern, the value of X corresponds to ****32****, as it follows the consistent increase in word length according to the observed pattern in the given data.

 Quick Tip

When solving such pattern-based questions, observe how the lengths of words change and try to identify the underlying rule, such as the number of syllables or characters, and apply it systematically to the new word.