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Logical Reasoning Tricks and Techniques for
Exam: IAS, PCS, UPSC, Bank PO, NDA, RRB, SSC, Indian Air Force, Etc.

VERBAL REASONING -INSERING AND MISSING CHARACTERS (ENGLISH)

Q1: Find the missing character in the series: A, C, E, G, ?, K.

Long Method: To solve this, first observe the pattern in the series. The series starts with A, which is the 1st letter of the alphabet. The next letter, C, is the 3rd letter, E is the 5th letter, and G is the 7th letter. The difference between each consecutive letter is 2. So, following this pattern, the letter after G (the 7th letter) will be the 9th letter of the alphabet, which is I. Therefore, the missing character is I.

Short Method: Add 2 to the position of G (7th letter), which gives us 9. The 9th letter of the alphabet is I.

Q2: What is the next term in the sequence: B2, D4, F6, H8, ?

Long Method: First, observe the letters: B, D, F, H. Each letter is two positions ahead of the previous one. Similarly, the numbers are increasing by 2 each time. Following this pattern, after H comes J (H + 2 positions), and after 8 comes 10. Thus, the next term is J10.

Short Method: Increment the letter H by 2 positions to get J and the number 8 by 2 to get 10, resulting in J10.

Q3: Complete the series: 3, 8, 15, 24, ?

Long Method: First, calculate the differences between the terms: 8-3 = 5, 15-8 = 7, 24-15 = 9. Notice the pattern in the differences: they increase by 2. Therefore, the next difference should be 9+2 = 11. Adding 11 to the last term 24, we get 35. Thus, the next number is 35.

Short Method: Add 11 (next increment in the series) to 24 to get 35.

Q4: Determine the missing character: 2, 5, 10, 17, 26, ?

Long Method: Observe the differences between terms: 5-2=3, 10-5=5, 17-10=7, 26-17=9. The differences form an arithmetic sequence: 3, 5, 7, 9. The next difference should be 9+2=11. Adding 11 to 26 gives 37. Thus, the missing character is 37.

Short Method: Next difference is 11 (continuing the pattern), so 26 + 11 = 37.

Q5: Find the missing character in the series: P, R, T, V, ?

Long Method: The given series progresses by skipping one letter: P (skip Q), R (skip S), T (skip U), and V. Therefore, the next letter should be two positions after V, which is X. Thus, the missing character is X.

Short Method: Skip one letter after V; the next letter is X.

Q6: What comes next in the sequence: 1, 4, 9, 16, 25, ?

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Long Method: Notice that each term is a perfect square: 1^2, 2^2, 3^2, 4^2, 5^2. The next term follows the same pattern, which is 6^2. So, 6^2 = 36. Hence, the next term is 36.

Short Method: 6^2 = 36.

Q7: Complete the series: M, O, Q, S, ?
Long Method: Each letter in the series is 2 positions ahead of the previous one: M (13th letter), O (15th letter), Q (17th letter), S (19th letter). Continuing this pattern, the next letter is 21st, which is U. Therefore, the missing character is U.

Short Method: Add 2 to S to get U.

Q8: Find the missing character in the sequence: 3, 9, 27, ?, 243
Long Method: Observe that each term is 3 times the previous term: 3·3=9, 9·3=27. Following this pattern, 27*3 = 81. Thus, the missing term is 81.

Short Method: 27 * 3 = 81.

Q9: Determine the missing number in the series: 2, 5, 12, 23, ?
Long Method: First, find the differences between terms: 5-2=3, 12-5=7, 23-12=11. These differences form a pattern increasing by 4: 3, 7, 11. So, the next difference should be 11+4=15. Adding 15 to 23, we get 38. Thus, the next term is 38.

Short Method: Next difference is 15, so 23 + 15 = 38.

Q10: Complete the series: 10, 15, 21, 28, ?
Long Method: Calculate the differences: 15-10=5, 21-15=6, 28-21=7. Notice the differences are increasing by 1. The next difference should be 7+1=8. Adding 8 to 28, we get 36. Therefore, the next term is 36.

Short Method: Next difference is 8, so 28 + 8 = 36.

Q11: What is the missing number in the sequence: 1, 4, 10, 19, ?
Long Method: Find the differences: 4-1=3, 10-4=6, 19-10=9. The differences are increasing by 3: 3, 6, 9. The next difference should be 9+3=12. Adding 12 to 19, we get 31. Thus, the missing term is 31.

Short Method: Next difference is 12, so 19 + 12 = 31.

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Q12: Complete the sequence: 7, 14, 28, 56, ?
Long Method: Each term is double the previous term: 7*2=14, 14*2=28, 28*2=56. *Following this pattern,* 56*2=112. Thus, the next term is 112.

Short Method: 56 * 2 = 112.

Q13: Determine the next term in the series: A1, B4, C9, D16, ?
Long Method: Observe the pattern: the letters are in sequence, and the numbers are perfect squares of their positions in the alphabet: A1 (1^2), B4 (2^2), C9 (3^2), D16 (4^2). The next term should follow E (5th letter) and 5^2=25. Hence, the next term is E25.

Short Method: E (5th letter) and 5^2=25, so E25.

Q14: Find the missing character in the sequence: Z, X, V, T, ?
Long Method: The series moves backward in the alphabet, skipping one letter each time: Z (skip Y), X (skip W), V (skip U), T. The next letter, skipping S, is R. Therefore, the missing character is R.

Short Method: Skip one letter backward from T; the next letter is R.

Q15: Complete the sequence: 8, 27, 64, 125, ?
Long Method: Observe the pattern: the numbers are cubes of consecutive integers: 2^3=8, 3^3=27, 4^3=64, 5^3=125. The next term should be 6^3=216. Thus, the next term is 216.

Short Method: 6^3 = 216.

Q16: Determine the missing character: 5, 12, 21, 32, ?
Long Method: Calculate the differences: 12-5=7, 21-12=9, 32-21=11. The differences are increasing by 2: 7, 9, 11. The next difference should be 11+2=13. Adding 13 to 32, we get 45. Therefore, the next term is 45.

Short Method: Next difference is 13, so 32 + 13 = 45.

Q17: Complete the series: B3, D5, F7, H9, ?
Long Method: The letters progress by skipping one letter: B, D, F, H. The numbers increase by 2 each time: 3, 5, 7, 9. Following this pattern, the next letter is J (skipping I) and the number is 11 (9+2). Therefore, the next term is J11.

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Short Method: Next letter is J (B+2 steps), and next number is 11 (9+2), so J11.

Q18: Find the missing number in the sequence: 3, 8, 18, 38, ?
Long Method: Observe the differences: 8-3=5, 18-8=10, 38-18=20. The differences are doubling each time: 5, 10, 20. The next difference should be 20*2=40. Adding 40 to 38, we get 78. Therefore, the missing term is 78.

Short Method: Next difference is 40, so 38 + 40 = 78.

Q19: Determine the next term in the series: A2, C4, E6, G8, ?
Long Method: The letters progress by skipping one letter: A, C, E, G. The numbers increase by 2 each time: 2, 4, 6, 8. Following this pattern, the next letter is I (skipping H) and the number is 10 (8+2). Therefore, the next term is I10.

Short Method: Next letter is I (G+2 steps), and next number is 10 (8+2), so I10.

Q20: What comes next in the sequence: 5, 11, 23, 47, ?
Long Method: Observe the pattern in the differences: 11-5=6, 23-11=12, 47-23=24. The differences are doubling each time: 6, 12, 24. The next difference should be 24*2=48. Adding 48 to 47, we get 95. Thus, the next term is 95.

Short Method: Next difference is 48, so 47 + 48 = 95.

Q21: Complete the series: K1, M4, O9, Q16, ?
Long Method: The letters progress by skipping one letter: K, M, O, Q. The numbers are perfect squares of their positions in the sequence: $1^2=1$, $2^2=4$, $3^2=9$, $4^2=16$. The next term should be S (skipping R) and $5^2=25$. Thus, the next term is S25.

Short Method: Next letter is S (Q+2 steps), and next number is 25 (5^2), so S25.

Q22: Find the missing character in the sequence: 1, 4, 9, 16, 25, ?
Long Method: Each term is a perfect square: 1^2, 2^2, 3^2, 4^2, 5^2. The next term follows the same pattern, which is 6^2. So, $6^2 = 36$. Hence, the next term is 36.

Short Method: $6^2 = 36$.

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Q23: Determine the missing number: 2, 6, 12, 20, ?

Long Method: Observe the differences: 6-2=4, 12-6=6, 20-12=8. The differences are increasing by 2: 4, 6, 8. The next difference should be 8+2=10. Adding 10 to 20, we get 30. Thus, the missing term is 30.

Short Method: Next difference is 10, so 20 + 10 = 30.

Q24: Complete the series: P, T, X, B, ?

Long Method: The series skips three letters each time: P (skip QRS), T (skip UVW), X (skip YZA), B. Following this pattern, the next letter should be F (skip CDE). Therefore, the missing character is F.

Short Method: Skip three letters after B to get F.

Q25: Find the next term in the sequence: 4, 9, 16, 25, 36, ?

Long Method: Each term is a perfect square: 2^2, 3^2, 4^2, 5^2, 6^2. The next term follows the same pattern, which is 7^2. So, $7^2 = 49$. Hence, the next term is 49.

Short Method: $7^2 = 49$.

Q26: What comes next in the series: A3, C6, E9, G12, ?

Long Method: The letters progress by skipping one letter: A, C, E, G. The numbers increase by 3 each time: 3, 6, 9, 12. Following this pattern, the next letter is I (skipping H) and the number is 15 (12+3). Therefore, the next term is I15.

Short Method: Next letter is I (G+2 steps), and next number is 15 (12+3), so I15.

Q27: Determine the next number in the series: 3, 7, 15, 31, ?

Long Method: Observe the differences: 7-3=4, 15-7=8, 31-15=16. The differences are doubling each time: 4, 8, 16. The next difference should be 16*2=32. Adding 32 to 31, we get 63. Thus, the next term is 63.

Short Method: Next difference is 32, so 31 + 32 = 63.

Q28: Complete the sequence: 2, 5, 11, 23, ?

Long Method: Find the differences: 5-2=3, 11-5=6, 23-11=12. The differences are doubling each time: 3, 6, 12. The next difference should be 12*2=24. Adding 24 to 23, we get 47. Thus, the next term is 47.

Short Method: Next difference is 24, so 23 + 24 = 47.

Q29: What comes next in the sequence: J1, L4, N9, P16, ?
Long Method: The letters progress by skipping one letter: J, L, N, P. The numbers are perfect squares of their positions in the sequence: $1^2=1, 2^2=4, 3^2=9, 4^2=16$. The next term should be R (skipping Q) and $5^2=25$. Thus, the next term is R25.

Short Method: Next letter is R (P+2 steps), and next number is 25 (5^2), so R25.

Q30: Find the missing character: 2, 5, 10, 17, ?
Long Method: Observe the differences: 5-2=3, 10-5=5, 17-10=7. The differences are increasing by 2: 3, 5, 7. The next difference should be 7+2=9. Adding 9 to 17, we get 26. Therefore, the missing term is 26.

Short Method: Next difference is 9, so 17 + 9 = 26.

Q31: Determine the missing character: 4, 12, 36, 108, ?
Long Method: Each term is multiplied by 3 to get the next term: $4\times3=12, 12\times3=36, 36\times3=108$. Following this pattern, $108\times3=324$. Thus, the next term is 324.

Short Method: 108 * 3 = 324.

Q32: Complete the sequence: M1, N4, O9, P16, ?
Long Method: The letters are in consecutive order: M, N, O, P. The numbers are perfect squares of their positions in the sequence: $1^2=1, 2^2=4, 3^2=9, 4^2=16$. The next term should be Q and $5^2=25$. Thus, the next term is Q25.

Short Method: Next letter is Q, and next number is 25 (5^2), so Q25.

Q33: What is the next term in the series: B2, D6, F12, H20, ?
Long Method: The letters progress by skipping one letter: B, D, F, H. The numbers increase by 4, 6, 8 respectively: 2, 6, 12, 20. The next difference should be 20+10=30. Thus, the next term is J30.

Short Method: Next letter is J, and next number is 30 (20+10), so J30.

Q34: Determine the next term in the sequence: 6, 11, 21, 36, ?
Long Method: Find the differences: 11-6=5, 21-11=10, 36-21=15. The differences are increasing by 5 each time: 5, 10, 15. The next difference should be 15+5=20. Adding 20 to 36, we get 56. Therefore, the next term is 56.

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Short Method: Next difference is 20, so 36 + 20 = 56.

Q35: Complete the series: A2, C8, E18, G32, ?
Long Method: The letters progress by skipping one letter: A, C, E, G. The numbers are increasing according to a specific pattern: 2, 8, 18, 32. The pattern can be deduced as $1^3+1=2$, $2^3+2=8$, $3^3+3=18$, $4^3+4=32$. The next term should follow $5^3+5=130$. Therefore, the next term is I50.

Short Method: Next letter is I, and next number is $5^3 + 5 = 130$.

Q36: Find the missing character: 5, 14, 27, 44, ?
Long Method: Observe the differences: 14-5=9, 27-14=13, 44-27=17. The differences are increasing by 4 each time: 9, 13, 17. The next difference should be 17+4=21. Adding 21 to 44, we get 65. Thus, the missing term is 65.

Short Method: Next difference is 21, so 44 + 21 = 65.

Q37: Determine the missing character: J1, K3, L5, M7, ?
Long Method: The letters are in consecutive order: J, K, L, M. The numbers are increasing by 2 each time: 1, 3, 5, 7. The next term should follow N and 9 (7+2). Thus, the next term is N9.

Short Method: Next letter is N, and next number is 9 (7+2), so N9.

Q38: What comes next in the sequence: 8, 24, 48, 80, ?
Long Method: Observe the differences: 24-8=16, 48-24=24, 80-48=32. The differences are increasing by 8 each time: 16, 24, 32. The next difference should be 32+8=40. Adding 40 to 80, we get 120. Thus, the next term is 120.

Short Method: Next difference is 40, so 80 + 40 = 120.

Q39: Complete the sequence: B1, D4, F9, H16, ?
Long Method: The letters progress by skipping one letter: B, D, F, H. The numbers are perfect squares of their positions in the sequence: $1^2=1$, $2^2=4$, $3^2=9$, $4^2=16$. The next term should be J and $5^2=25$. Thus, the next term is J25.

Short Method: Next letter is J, and next number is 25 (5^2), so J25.

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Q40: Find the missing character: 3, 6, 11, 18, ?
Long Method: Observe the differences: 6-3=3, 11-6=5, 18-11=7. The differences are increasing by 2 each time: 3, 5, 7. The next difference should be 7+2=9. Adding 9 to 18, we get 27. Thus, the missing term is 27.

Short Method: Next difference is 9, so 18 + 9 = 27.

Q41: Find the missing number in the sequence: 1, 2, 6, 24, ?
Long Method: Observe the pattern: the numbers are factorials of consecutive numbers. 1 (1!), 2 (2!), 6 (3!), 24 (4!). The next term should be 5! (factorial of 5), which is 120. Therefore, the next term is 120.

Short Method: 5! = 120.

Q42: Determine the next term in the series: A1, B2, C3, D4, ?
Long Method: The letters are in consecutive order: A, B, C, D. The numbers are also in consecutive order: 1, 2, 3, 4. Following this pattern, the next term should be E (next letter) and 5 (next number). Therefore, the next term is E5.

Short Method: Next letter is E, and next number is 5, so E5.

Q43: What comes next in the sequence: 2, 5, 10, 17, 26, ?
Long Method: Observe the differences: 5-2=3, 10-5=5, 17-10=7, 26-17=9. The differences are increasing by 2 each time: 3, 5, 7, 9. The next difference should be 9+2=11. Adding 11 to 26, we get 37. Therefore, the next term is 37.

Short Method: Next difference is 11, so 26 + 11 = 37.

Q44: Complete the series: 4, 12, 28, 52, ?
Long Method: Observe the differences: 12-4=8, 28-12=16, 52-28=24. The differences are increasing by 8 each time: 8, 16, 24. The next difference should be 24+8=32. Adding 32 to 52, we get 84. Thus, the next term is 84.
Short Method: Next difference is 32, so 52 + 32 = 84.

Q45: Find the next term in the sequence: P3, R5, T7, V9, ?
Long Method: The letters progress by skipping one letter: P, R, T, V. The numbers are increasing by 2 each time: 3, 5, 7, 9. Following this pattern, the next letter is X (skipping W) and the number is 11 (9+2). Therefore, the next term is X11.

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Short Method: Next letter is X, and next number is 11, so X11.

Q46: Determine the next term in the sequence: 2, 10, 30, 68, ?

Long Method: Observe the differences: 10-2=8, 30-10=20, 68-30=38. The differences are: 8, 20, 38. These differences increase by 12 then by 18. The next increase might follow a pattern like 12, 18, 24 (difference increment by 6). Therefore, 38+24=62. Adding 62 to 68, we get 130. Thus, the next term is 130.

Short Method: Next difference increases by 24, so 68 + 62 = 130.

Q47: Complete the series: 3, 9, 27, 81, ?

Long Method: Each term is multiplied by 3 to get the next term: 3$3$=9, 9$3$=27, 27$3$=81. *Following this pattern, 81$3$=243.* Thus, the next term is 243.

Short Method: 81 * 3 = 243.

Q48: Find the missing number in the series: 1, 4, 9, 16, 25, ?

Long Method: Each term is a perfect square: 1^2, 2^2, 3^2, 4^2, 5^2. The next term follows the same pattern, which is 6^2. So, 6^2 = 36. Hence, the next term is 36.

Short Method: 6^2 = 36.

Q49: Determine the next term in the sequence: B2, D4, F6, H8, ?

Long Method: The letters progress by skipping one letter: B, D, F, H. The numbers are increasing by 2 each time: 2, 4, 6, 8. Following this pattern, the next letter is J (skipping I) and the number is 10 (8+2). Therefore, the next term is J10.

Short Method: Next letter is J, and next number is 10, so J10.

Q50: Complete the series: A2, C4, E6, G8, ?

Long Method: The letters progress by skipping one letter: A, C, E, G. The numbers increase by 2 each time: 2, 4, 6, 8. Following this pattern, the next letter is I (skipping H) and the number is 10 (8+2). Therefore, the next term is I10.

Short Method: Next letter is I, and next number is 10, so I10.

Q51: What comes next in the sequence: 7, 14, 28, 56, ?
Long Method: Each term is multiplied by 2 to get the next term: $7*2=14, 14*2=28, 28*2=56$. *Following this pattern, 56*2=112.* Thus, the next term is 112.

Short Method: 56 * 2 = 112.

Q52: Determine the next term in the series: A3, B6, C9, D12, ?
Long Method: The letters are in consecutive order: A, B, C, D. The numbers increase by 3 each time: 3, 6, 9, 12. Following this pattern, the next letter is E and the number is 15 (12+3). Therefore, the next term is E15.

Short Method: Next letter is E, and next number is 15, so E15.

Q53: Find the missing number in the series: 10, 21, 43, 87, ?
Long Method: Observe the pattern in the differences: 21-10=11, 43-21=22, 87-43=44. The differences are doubling each time: 11, 22, 44. The next difference should be 44*2=88. Adding 88 to 87, we get 175. Thus, the missing term is 175.

Short Method: Next difference is 88, so 87 + 88 = 175.

Q54: Complete the series: C2, E4, G6, I8, ?
Long Method: The letters progress by skipping one letter: C, E, G, I. The numbers increase by 2 each time: 2, 4, 6, 8. Following this pattern, the next letter is K (skipping J) and the number is 10 (8+2). Therefore, the next term is K10.

Short Method: Next letter is K, and next number is 10, so K10.

Q55: What comes next in the sequence: 5, 12, 19, 26, ?
Long Method: Observe the differences: 12-5=7, 19-12=7, 26-19=7. The differences are constant: 7. Adding 7 to 26, we get 33. Therefore, the next term is 33.

Short Method: 26 + 7 = 33.