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ALPHA-NUMERIC SERIES

Alphabet Test

- Arranging the general alphabetic letters which are given in jumbled or word form in the sequence is called an arrangement.
- When two or more patterns of letters including number or symbol occurring equally and making some pattern is called pattern of words or letters in general.

Points to Remember

- 'A' Preceded by 'B' ⟶ B A
- 'A' Followed by 'B' ⟶ A B
- 'A' Precedes 'B' ⟶ A B
- 'A' Follows 'B' ⟶ B A
- Vowel ⟶ A, E, I, O, U
- Consonant ⟶ B, C, D, F, G, H, J, K, L, M, N, P, Q, R, S, T, V, W, X, Y, Z.
- Prime Numbers ⟶ A number which is not divisible by any number except 1.
  Example: 2, 3, 5, 7, 11, 13, 17, 19, 23, etc.
- Even Numbers ⟶ A number which is divisible by 2.
  Example: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, etc.
- Odd Numbers ⟶ A number which is not divisible by 2.
- Example: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, etc.

Number Series (Group Based)

- In this pattern, group of numbers are given, and the multiple operations will be asked to perform in the questions for example, addition, multiplication, interchanging of digits, etc.

Series: 567 289 376 189 852

Q. If 1 is added to the 2nd digit of each number and then positions of the first and last digits are interchanged, which of the following will be the highest number?

A. Given series: 567 289 376 189 852
Adding 1 to the 2nd digit: 577 299 386 199 862
Now, interchange the first and last digit: 775 992 683 991 268
So, 992 is the highest number which comes from 289.

Trick

- In the Question, highest number after interchanging first and last digits is asked, so we don't

need to perform the operation of addition of 1 to the 2nd digit of every number.

- We should check the last digit of each number only.
- Example: 56**7** 28**9** 37**6** 18**9** 85**2**
- There are two highest digits: 28**9** and 18**9**
- So, we must check only these two numbers,
- Interchange first and last digits and add 1 to the 2nd digit: **9**9**2** and **9**9**1**

Q. If all the digits are arranged in increasing order within the numbers, then which number will be the lowest?

A. Given Series: 567, 289, 376, 189, 852
When all the digits are arranged in increasing order: 567, 289, 367, 189, 258
So, '189' is the lowest number which comes from '189'.

Trick

- In the question, lowest number after arranging the digits in increasing order is asked. So, we must check that which number has the lowest digit.
- Example: 567 289 376 189 852
- There is only 189 which consists the lowest digit.
- So, '189' is the correct answer and it comes from '189'.

Q. If the positions of first digits of each number are replaced by its next number and last digits of each number are replaced by its previous number, how many numbers have minimum two same digits?

A. Given Series: 567, 289, 376, 189, 852
Positions of first digits of each number are replaced by its next number and last digits of each number are replaced by its previous number:
66**6** **3**8**8** **4**7**5** **2**8**8** **9**5**1**, 'So, there are 3 numbers which have minimum two same digits'
So, we have three numbers which has two same digits: **666** 3**88** 2**88** and it comes from 567, 289, 189.

Alphabet Series (Group Based)

- In Alphabet Series section, group of alphabets are given, and the multiple operations will be asked to perform in the questions. For example, arrange in dictionary or reverse dictionary order, interchanging of alphabets etc.

Series: DEW BIG RAW FAN DOG

Q. If the positions of first and last alphabets of each word are interchanged and arranged in

dictionary order then, which word comes last?

A. Given words are: DEW BIG RAW FAN DOG
On interchanging the first and the last alphabet: **W**E**D** **G**I**B** **W**A**R** NA**F** **G**O**D**
Now arranging in dictionary order: GIB GOD NAF WAR WED
So, 'WED' is the last word and it comes from 'DEW'.

Trick

- In the Question, number of words are starting with vowel after replacing vowels of each word by its next letter and consonant by its previous letter is asked.
- So, we must replace only first letter of the word which is starting with a consonant.
- Example: CEW AIG QAW EAN COG
- Now, words starting with vowel are: AJF EBM
- So, there are two words "AJF and EBM" which are starting with vowel.

Q. If the positions of first and last alphabets of each word are interchanged, how many meaningful words are formed?

A. Given words are: DEW BIG RAW FAN DOG
On exchanging the alphabets: WED GIB WAR NAF GOD
The meaningful words are: WED GIB WAR GOD
So, there are four meaningful words are formed.

Mixed Series

Mixed Series is an arrangement of numbers, letters and symbols in a certain order.

Simple Series

In simple series, no operation will be asked to perform. Questions will be asked based on positions only.

Rule #1:
Left – Left = from the Left end
Left + Right = from the Right end
Right – Right = from the Right end
Right + Left = from the Left end

Please refer the given examples for understanding the application of these rules:

Series: A B 6 P 7 2 Z @ X ? V T W # & N S L %

Q. Which element is 6th to the left of 12th element from the left end?

A. 12th element from the left end:
A B 6 P 7 2 Z @ X ? V T W # & N S L %
Now, 6th to the left of 12th element:
A B 6 P 7 **2** Z @ X ? V **T** W # & N S L %
So, 2 is 6th to the left of 12th element from the left end.

Trick
Left – Left = from Left end
12 – 6 = 6th from the left end.
6th element from left end is: A B 6 P 7 2 Z @ X ? V T W # & N S L %
Therefore 2 is the correct answer.

Q. Which element is 4th to the right of 11th element from the left end?

A. 11th element from the left end:
A B 6 P 7 2 Z @ X ? **V** T W # & N S L %
4th element to the right of 11th element: A B 6 P 7 2 Z @ X ? **V** T W # **&** N S L %

Trick
Right + Left = from left end
4 + 11 = 15th from the left end 15th element from left end is:
A B 6 P 7 2 Z @ X ? V T W # & N S L %
Therefore, & is the correct answer.

Q. Which element is 5th to the right of 9th element from the right end?

A. 9th element from the right end is:
A B 6 P 7 2 Z @ X ? **V** T W # & N S L %
5th to the right of 9th element from the right end: A B 6 P 7 2 Z @ X ? V T W # & **N** S L %
So, N is the 5th to the right of 9th from the right end.

Trick
Right – Right = from the right 9 – 5 = 4th from the right end.
4th element from the right end is:
A B 6 P 7 2 Z @ X ? V T W # & N S L %
So, N is the 5th to the right of 9th element from the right end.

Operation based Series

In Stepwise series, a few operations are given which need to be applied on the given mixed series and then the questions can be asked from the different steps.
Step 1: The vowels are exchanged with its next letter.
Step 2: After completing step 1, the symbols are exchanged with 8.
Step 3: After completing step 2, numbers are increased by 1.

Input: N P L B S % & 1 E 4 G 4 $ T G 2 I 0 U K @ 1 7 V A

Q. How many 8 are there in the mixed series after completing the step 2?

A. Step 1: The vowels are exchanged with its next letter.
N P L B S % & 1 F 4 G 4 $ T G 2 J 0 V K @ 1 7 V B

Step 2: The symbols are exchanged with 8.
N P L B S 8 8 1 F 4 G 4 8 T G 2 J 0 V K 8 1 7 V B

Step 3: Numbers are increased by 1.

Creating New Words

In this section you will be given a few letters and will need to find if those letters can make a meaningful word or not. If yes then how many meaningful words can be formed or the letter at any position of the formed word can be asked.

Q. How many meaningful English words can be formed with the help of letter T, A, E such that no letter is missed, and no letter is repeated.

A. T, A, E
We can clearly see that the words that can be formed are:

- TEA
- EAT
- ATE

Hence 3 meaningful words can be formed.

Q. How many meaningful English words can be formed with the help of 4th, 5th, 7th and 13th letter of INTERNATIONAL such that no letter is repeated.

A. INTERNATIONAL
E, R, A, L are the 4th, 5th, 7th and 13th letter
We can clearly see that the words that can be formed are:

- REAL
- EARL
- RALE

Hence 3 meaningful words can be formed.

Q. If it is possible to make only one meaningful English word with the 1st, 5th, 6th, and 8th letters of the word INFORMATION, which of the following will be the fourth letter of that word? If no such word can be made give 'X' as the answer.

A. Given word – INFORMATION
Chosen letters are – I, R, M, T
Possible word – TRIM (only one word is possible here)
Fourth letter of the word is: M
Thus, M is the correct answer.

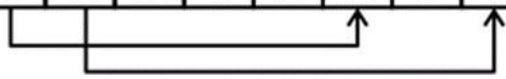
Position of Letters and Numbers in a Series

In this section you have to find the pairs of the letters or digits which has as many letters or digits between them in the word or number as they have between them in the English alphabetical series or number sequence.

Q. How many such pairs of letters are there in the word "INTERNET" after arranging the letters of the word in alphabetical order each of which has as many letters between them in the word, as they have between them in the English alphabetical series.

A. The word can be represented as follows,

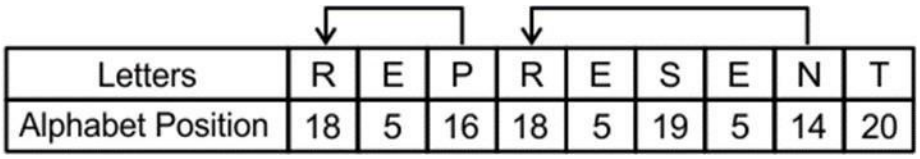
Letters	I	N	T	E	R	N	E	T
Alphabet Position	9	14	20	5	18	14	5	20



Clearly, we can see that 2 such pairs are there i.e., NT and IN.

Q. How many such pairs of letters are there in the word "REPRESENT" each of which has as many letters between them in the word (in both forward and backward directions), as they have between them in the English alphabetical series?

A. The word can be represented as follows,



Clearly, we can see that 3 such pairs are there i.e., RP, RN and PS.

Q. How many such pairs of digits are there in the numbers "2651894" after arranging the digits of the number in increasing order each of which has as many digits between them in the number, as they have between them in the sequence? (Both direction)

A. The numbers can be represented as follows,

Clearly, we can see that 5 such pairs are there i.e., 12, 45, 46, 56 and 89.

Practice Questions:

Direction: Study the following arrangement carefully and answer the questions given below.

Series: 6 R O T 4 A 8 % B F 1 E # W @ 9 H I $ M N * 3 2 V $ 5 G P 7 Q

Q. How many such consonants are there in the above arrangement, each of which is immediately preceded by a consonant and immediately followed by a number?

A) None

B) One

C) Two

D) Three

Correct Option: C

Explanation:

According to the question,
Consonant – Cosonant-Number
B -F -1
G -P -7

Series: 6 R 0 T 4 A 8 % B F 1 E # W @ 9 H I $ M N * 3 2 V $ 5 G P 7 Q

Q. How many such vowels are there in the above arrangement, each of which is immediately preceded by a letter but immediately not followed by a symbol?

A) None

B) One

C) Two

D) Three

Correct Option: B

Explanation:

According to question
Letter-Vowels-Letter/Number
R - O - T

Series: 6 R 0 T 4 A 8 % B F 1 E # W @ 9 H I $ M N * 3 2 V $ 5 G P 7 Q

Q. Which of the following is the fourth to left of the twelfth from the left end?

A) 8

B) B

C) 2

D) %

Correct Option: D

Explanation:

According to question,
L - L = L
12 - 4 = 8^{TH}
So the required element is %.

Series: 6 R 0 T 4 A 8 % B F 1 E # W @ 9 H I $ M N * 3 2 V $ 5 G P 7 Q

Q. Three of the following four are alike in a certain way based on their positive in the above arrangement and so form a group. Which is the one that does not belong to that group?

A) 406

B) F%A

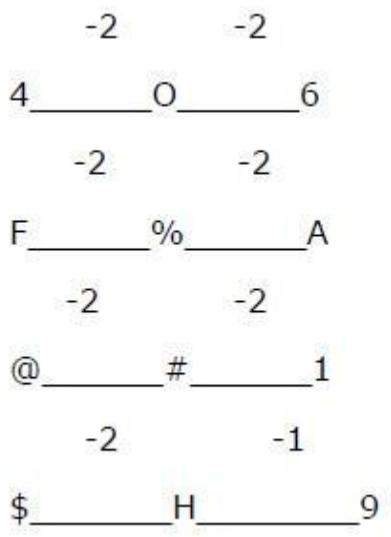
C) @#1

D) $H9

Correct Option: D

Explanation:

According to question,



Series: 6 R 0 T 4 A 8 % B F 1 E # W @ 9 H I $ M N * 3 2 V $ 5 G P 7 Q

Q. If all the symbols are eliminated from the above arrangement, than which of the following will be the 5th to the right of 10th element from the right end?

A) 4

B) 5

C) V

D) A

Correct Option: B

Explanation:

According to question.
R - R = R
10 - 5 = 5th from right end after deleting all the symbols is 5.