## Study Notes On

 Alphabetical Reasoning \& Word Formation
## Alphabetical Reasoning:

The questions are usually based on the place of the English letter and with reference to their position, we find out the logic behind and solve the question. This type of question varies on the arrangement of alphabetical order. It can be Backward, first half backward, second half backward, multiple letter segments in changed order etc. Some of the questions asked are based on finding the middle letter of two specified letters and in some questions, it is asked that which letters do not change their place after alphabet arrangement. So, the detailed explanation with examples is as follow:
Place of letter in forward order
In this type of questions the exact letter has to be found out with the help of direction of place given in the question. The example discussed as below will give you a better
idea about this type of questions.
Ex 1: Find the $11^{\text {th }}$ letter to the left of $20^{\text {th }}$ letter from left in the English alphabet. D

Solution: (d)
Let us see


Hence, $11^{\text {th }}$ letter to the left of $20^{\text {th }}$ letter from left is $I$.
Alternate Method
In English alphabet $11^{\text {th }}$ letter to the left of $20^{\text {th }}$ letter of your left $=(20-11)$ th letter from the left=9th letter from the left $=1$
Place Of Letter in Completely Backward Order
In such questions the order of letters is completely reversed or they are counted from $Z$ to $A$ and then the place of letter is asked with the help of direction.

Ex 2: If English alphabet is written in backward order, then what will be $13^{\text {th }}$ letter to the left of the $3^{\text {rd }}$ letter from right?
a) $P$
b) N
c) $R$
d) $Q$

Solution: (a)
Backward order is written as
1234567891011121314151617181920212223242526


Now, the $13^{\text {th }}$ letter to left of the 3 rd letter from right is $P$.
Alternate Method
In backward order of alphabet, $13^{\text {th }}$ letter to the left of the $3^{\text {rd }}$ letter of your right $=(3+13)$ th letter from right $=16^{\text {th }}$ letter from right $P$.
Place of a Letter When First Half is in Backward Order
In such type of question, only the $1^{\text {st }}$ half of the order of alphabetical series is reversed and remaining are left unaltered i.e., order of $A$ to $M$ is reversed and then questions related to position of latter are asked.

Ex 3: If $1^{\text {st }}$ half of the English alphabet is written in backward order, then what will be the $7^{\text {th }}$ letter to the left the $10^{\text {th }}$ letter from your right?
C
E
D
J
Solution: (c) Let us see
1312111098765432114151617181920212223242526
MLKJIHGFE(D)CBANOPQRETUVWXYZ


The $7^{\text {th }}$ letter to the left of $10^{\text {th }}$ letter from our right is $D$.

Place of a Letter When Second Half is in Backward Order
In such type of questions the $2^{\text {nd }}$ half is reversed i.e., from N to Z and remaining are kept as it is and then questions related to place of English alphabet are asked. Ex 4: If $2^{\text {nd }}$ half of the English alphabet is written in backward order, then what will be the $7^{\text {th }}$ letter to the right of $13^{\text {th }}$ letter from your left?
a) T
b) $U$
c) V
d) S

Solution: (a) Let us see

## $12345678910111213 \mid 26252423222120191817161514$

ABCDEFGHIJKLM|ZYXWVU(T)SRQPON


The $7^{\text {th }}$ letter to the right of $13^{\text {th }}$ letter from our left is T .
Multiple Letter Segment in Backward Order
In such type of questions, no specified order of change is followed in alphabetical order. The are changed according to the condition given in particular question.

Ex 5: If first four letters of the English alphabet are written in reverse order; again next 5 letters are written in reverse order ;again next 6 letter s are written in reverse order ; next 7 letter are written in reverse order and finally, the remaining letters are also written in reverse order, then what will be the $7^{\text {th }}$ letter to the left of the $8^{\text {th }}$ letter from right?
a) M
b) N
c) O
d) L

Solution: (a)
Let us see the arrangement

7th
8th

The $7^{\text {th }}$ letter to the $8^{\text {th }}$ th letter from right is M .
Number of Letter in the Middle of Two Letters
In this particular type, question asked to calculated the total number of English letters between any two specified letter as directed in the question.
Four situations can be created under these type of problems


Ex 6: How many letters are there between $8^{\text {th }}$ letter from left and $7^{\text {th }}$ letter right in the English alphabet?
a) 7
b) 11
c) 8
d) 9

Solution: (b) Let us see

## 1234567891011121314151617181920212223242526



There are $11^{\text {th }}$ letters between $8^{\text {th }}$ letter from left and $7^{\text {th }}$ letter from right. Alternate Method
Total number of letter in the English alphabet $=26$ Required number of letters $=26-(8+7)=11$
Middle Letter between Two letters
In these types of questions, it is asked to find the middle letter the two specified letters of English alphabet.
Ex 7 : Which letter is in the middle of $7^{\text {th }}$ letter from left and $10^{\text {th }}$ letter from right in the English alphabet?
a) $L$
b) $P$
c) $M$
d) Q

Solution: (a) Let us see
1234567891011121314151617181920212223242526


Letters between $G$ and $Q$ is $L$.
Alternate Method
$10^{\text {th }}$ letter from right $=27-10=17^{\text {th }}$ letter from left.
Required middle letter $=7+(17-7) / 2=24 / 2=12^{\text {th }}$ letter from left $=L$
Same Position of alphabet after arranging Alphabetically.
In this type of questions, a word is given and then asked how many letters remain same in their position, if they are arranged in alphabetical order.

Ex 8: How many such letters are there in the word 'CADMP' which remain same in their position, if they are arranged in alphabetical order?
One
Two
Three
Four
Solution: (c)


So, such type of letters are $\mathrm{D}, \mathrm{M}$ and P .
Arranging the letters of the word
Ex 9: Arrange the following words in natural way and find odd one out.
ELMSL
ERHA
IKNTH
SAETE
Ans. B
Solution -
On arranging the given words we get-
SMELL
HEAR/HARE
THINK
TEASE
Here, only ERHA gives two meaningful words on arranging of its letters. Hence, the correct answer is option (C).
Pair of alphabets -
Ex 10: How many such pairs of letters are there in the word CRYING each of which has as many letters between them in the word as in the English alphabet?
a) None
b) One
c) Two
d) Three

Ans. B
Solution -
$\begin{array}{lll}C & R & Y\end{array}$


Only one pair we see from the backward, no pair from forward. Hence, the correct answer is option B.
Position of letters interchanged -

Ex 11: The positions of the first and the tenth letters of the word MICROPHONE are interchanged, similarly, the positions of the second and ninth letters and the third and eighth letters and fourth and seventh letters and fifth and sixth letters are interchanged. In the new arrangement thus formed, how many alphabets are there between the fourth letter from the left and letter third from the right end?
(a) 3
(b) 1
(c) 2
(d) More than 3

Ans. A
Solution -
In this question, we show that -

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1 2 3 4 5 6 7 8 9 10
MICROPHONE
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After the rearrangement of the word will be -

## E N O H P ORCIM

Thus the alphabet between the fourth letter from left means H and third letter from the right means $C$ is three ( $P, O, R$ ).
So the correct answer is option A.

## WORD FORMATION:

## Finding Correct option-

In this type of questions, a word is given and then asked out of four options (words) which option(word) can be formed using the letters given in given word. For example:
Ex 12. In the following question, select the word which can be formed using the letters of the given word CHOCOLATE

## TELL

HEALTH
LATE
COOLER

Solution- LATE is the only word which can be formed from the given word CHOCOLATE. Hence, option (c) is the correct answer.

## Finding Incorrect option:

For example:
Ex 13. In the following question, select the word which cannot be formed using the letters of the given word LACTOBACILLUS
ABOUT
LAST
TABLET
BASIC

Solution- E is not present in the word LACTOBACILLUS. Therefore, we cannot form the word TABLET. Hence, option (c) is the correct response.

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