## LETTER SERIES

Letter series consists of a series of small letters which follow a certain pattern. However, some letters are missing from the series. These missing letters are then given in a proper sequence as one of the alternatives and we have to choose that alternative.

## Examples:

Ex. 1 abb _ aaa __ bba___
(A) baa
(B) abb
(C) bab
(D) aab

Sol.(A) We proceed step by step as shown below:

1. The first blank space should be filled in by 'b' so that we have two a's followed by two b's.
2. The second blank space should be filled in either by 'a' so that we have four a's followed by two b's or by 'b' so that we have three a's followed by three b's.
3. The last space must be filled in by 'a'.
4. Thus, we have two possible answers : 'baa' and 'bba' . But, only 'baa' appears in the alternatives, So, the answer is (A).
5. In case, we had both the possible answers in the alternatives, we would have chosen the one that forms a more prominent pattern, which is aabb/aaabbb/aa. Thus our answer would have been 'bba'.

Ex. 2 $\qquad$
(A) abbba
(B) abbab
(C) baabb
(D) bbaba

Sol.(B) The series is $\underline{a b} / a b / a b / a b / a b / a b$ thus the pattern ab is repeated
Ex. 3 $\qquad$ babbba $\qquad$ a __ _
(A) ababb
(B) baaab
(C) bbaba
(D) babbb

Sol.(D) The series is bababb/bababb Thus the pattern bababb is repeated

Ex. 4 abca $\qquad$ bcaab $\qquad$ ca _ bbc $\qquad$ a
(A) ccaa
(B) bbaa
(C) abac
(D) abba

Sol.(C) The series is abc/aabc/aabbc/aabbcc/a
Ex. 5 a__ bccb__ ca _ cca _ baab __c
(A) ababc
(B) abcaa
(C) accab
(D) bacaa

Sol.(A) The series is aabbcc/bbcaa/ccabb/aabcc the letters move in a cyclic order and in each group, the first and third letters occur twice.

Ex. 6 $\qquad$
(A) aabcb
(B) abccb
(C) abacb
(D) bacbb

Sol.(B) The series is cabbbb/cabbbb/cabbbb Thus, the pattern cabbbb is repeated.

Ex. 7 mnonopqopqrs $\qquad$
(A) mnopq
(B) oqrst
(C) pqrst
(D) qrstu

Sol.(C) The series is mno/nopq/opqrs/pqrst
Ex. 8 b__ b_bb __ bbb __ bb _ b
(A) bbbbba
(B) bbaaab
(C) ababab
(D) aabaab

Sol.(C) The series is babb/bbab/bbba/bbbb. Thus in each sequence, a moves one step forward and b takes its place and finally in the fourth sequence, it is eliminated.

## Correspondence Series

This type of series consists of three sequences with three different elements (Usually capital letters, digits and small letters.) On the basis of the similarity in positions in the three sequences, a capital letter is found to correspond with a unique digit and a unique small letter, whenever it occurs. The candidate is required to trace out this correspondence and accordingly choose the elements to be filled in at the desired places.

Ex. 9 In the following series, choose the alternative which contains the numerals to be filled in the marked spaces, in the correct order.
B $\qquad$ D $\qquad$ C A B D A C B
$\qquad$ 4132 $\qquad$ ? ? ? ?
d $\qquad$
$\qquad$
$\qquad$ c
(A) $1,2,3,4$
(B) 2, 3, 1, 4
(C) $1,2,4,3$
(D) 2, 1, 4, 3

Sol.(A) Clearly, in the second series, 1 occurs at the same position as $D$ occurs in the first sereis, So 1 corresponds to $D$. thus, the first question mark below D is to be replaced 1 .
Now, in the third series, c at the eighth place corresponds to A in the first series. While c at the sixth place corresponds to 2 in the second series. So, 2 corresponds to A. Thus, the second question mark below A is to be replaced by 2 . In the third series, $a$ at the first place corresponds to B in the first series and a at the third place corresponds to 4 in the second sereis. So, 4 corresponds to B . Thus, the question mark below B is to be replaced by 4 .
Now, only 3 remains. So 3 corresponds to C. Thus, the question mark below C is to replaced by 3 . Thus DACB corresponds to $1,2,3,4$.

## Examples:

Ex. 10 C B _ $\mathrm{D}_{2} \mathrm{~B}$ A B C C B
_ - $12433^{2}$ ? ? ?
$\mathrm{a}-\mathrm{a} \mathrm{b}_{-} \mathrm{c}-\mathrm{b}-{ }_{-}-$
(A) 3, 4, 43
(B) $3,2,2,3$
(C) $3,1,1,3$
(D) $1,4,4,1$

Sol. (C) Comparing the positions of the capital letters, numbers and small letters, we find a corresponds to C and 1 corresponds to a. So, a and 1 correspond to C . b corresponds to A and 2 corresponds to b . So b and 2 correspond to A. Also, 4 corresponds to D.
So, the remaining number i.e. 3 corresponds to $B$. so, BCCB corresponds to $3,1,1,3$

Ex. 11 - A C B D -C D C D
2 - 41 - 14 -
$\mathrm{c} \mathrm{d}-\mathrm{b} \mathrm{c}_{-} \mathrm{a}$ ? ? ? ?
(A) $a, b, a, b$
(B) a, c, a, c
(C) c, b, c, b
(D) c, d, c, d

Sol. (A) Clearly, 4 corresponds to C and a corresponds to 4 . So, a corresponds to C. 1 corresponds to and $b$ corresponds to 1 . So, b corresponds to D. Thus, CDCD corresponds to $a, b, a, b$.

## Alphabet Series

In the alphabet series we have to find the relation or the order in which the letters have been grouped together, and hence, then missing group of letters from the choice given below.

## Examples:

Ex. 12 What terms will fill the blank spaces ?
Z, X, V, T, R, (...), (...)
(A) $\mathrm{O}, \mathrm{K}$
(B) $\mathrm{N}, \mathrm{M}$
(C) K, S
(D) $\mathrm{P}, \mathrm{N}$

Sol. Clearly, the given series consists of alternate letters in a reverse order. So, the missing terms would be P and N .

Ex. 13 What will be the next term in BDF, CFI, DHL?
(A) CJM
(B) EIM
(C) EJO
(D) EMI

Sol. Clearly, the first, second and third letters of each term are respectively moved one, two and three steps forward to obtain the corresponding letters of the next term. So, the missing term is EJO.

Ex. 14 Choose the term which will continue the following series:

P 3 C, R 5 F, T 8 I, V 12 L?
(A) Y 17 O
(B) X 17 M
(C) X 17 O
(D) X 16 O

Sol. Clearly, the first letters of the terms are alternate. The sequence followed by the numbers is $+2,+3,+4, \ldots$. The last letter of each term is three steps ahead of the last letter of the preceding term. Thus, the next term would be X 17 O .

## Exercise

## Directions :

In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives belows it. Choose the correct alternative.
Q. 1 _ $\mathrm{bbca}_{-} \mathrm{bcca}_{-} \mathrm{ac}_{-} \mathrm{a}_{-} \mathrm{cb}$
(A) abcba
(B) acbab
(C) bacab
(D) bcaab

(A) aabca
(B) abaca
(C) bacab
(D) bcaca
Q. $3 \mathrm{ab}_{-} \mathrm{aa} \mathrm{C}_{-} \mathrm{caab} \mathrm{c}_{-} \mathrm{c} \mathrm{cb}_{-} \mathrm{c}$
(A) bbcaa
(B) bcbca
(C) cabac
(D) cbbac

(A) acbaa
(B) bbcaa
(C) bccab
(D) cbaac
Q. 5 _ $^{\mathrm{aba}}$ _ cabc _ dcba _ $\mathrm{bab}_{-} \mathrm{a}$
(A) abdca
(B) bcadc
(C) abcdd
(D) cbdaa

(A) bdbda
(B) bddca
(C) dbbca
(D) bbdac

(A) abcda
(B) abdbc
(C) abdcb
(D) abcad
Q. 8 _ $b c d b c_{-} d c a b d ~+b c d b c_{-} d c d_{-} b d$
(A) aaaaa
(B) $\operatorname{ccccc}$
(C) bbbbb
(D) ddddd
Q. $\left.9 \mathrm{adb}_{-} \mathrm{ac} \mathrm{C}_{-} \mathrm{da} \mathrm{C}_{-} \mathrm{cddcb}\right]_{-} \mathrm{dbc} \mathrm{Z}_{-} \mathrm{cbda}$
(A) bccba
(B) cbbaa
(C) ccbba
(D) bbcad
Q. $10 \mathrm{c}_{-} \mathrm{bbb}_{-} \mathrm{abbbb}_{-} \mathrm{abbb}_{-}$
(A) aabcb
(B) abccb
(C) abacb
(D) bacbb
Q. 11 b _ abbc _ bbca _ bcabb _ ab
(A) acaa
(B) acba
(C) cabc
(D) cace
Q. $12 \mathrm{ac}_{\text {_ }} \mathrm{cab}$ _ baca _ aba _ acac
(A) aacb
(B) acbc
(C) babb
(D) bcbb
Q. 13 _ $\mathrm{acca}_{-} \mathrm{ccca} \mathbf{Z}_{\text {acccc }}$ aaa
(A) acca
(B) caaa
(C) ccaa
(D) caac
Q. 14 _ $\mathrm{bc}_{\text {_ _ }} \mathrm{bb}$ _ abc
(A) acac
(B) babc
(C) $a b a b$
(D) aacc
Q. 15 _ baa _ aab _ $\mathrm{a}_{-} \mathrm{a}$
(A) aabb
(B) aaba
(C) abab
(D) baab
Q. 16 _ _ babbba_ a _
(A) ababb
(B) baaab
(C) bbaba
(D) babbb
Q. $17 \mathrm{aa}_{-} \mathrm{ab}$ _ $\mathrm{aaa} \mathrm{a}_{-} \mathrm{a}$
(A) aaab
(B) aabb
(C) abab
(D) baaa
Q. $18 \mathrm{a}_{-} \mathrm{bbc}$ _ aab _ cca _ bbcc
(A) bacb
(B) acba
(C) abba
(D) caba
Q. 19 ab _ $^{\mathrm{aa}}$ _ $^{\mathrm{bbb}}$ _ aaa _ bbba
(A) abba
(B) baab
(C) aaab
(D) abab
Q. $20 \quad \mathrm{bc}$ _ $^{\mathrm{b}} \mathrm{C}_{-} \mathrm{c}_{-} \mathrm{ccb}$
(A) cbcb
(B) bbcb
(C) cbbc
(D) bcbc
Q. 21 _ $\mathrm{bbca}_{\text {_ }} \mathrm{bcca}_{\text {- }} \mathrm{ac}_{-} \mathrm{a}_{-} \mathrm{cb}$
(A) abcba
(B) acbab
(C) bacab
(D) bcaab

Answer Key

| Q.No | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ | $\mathbf{1 3}$ | $\mathbf{1 4}$ | $\mathbf{1 5}$ | $\mathbf{1 6}$ | $\mathbf{1 7}$ | $\mathbf{1 8}$ | $\mathbf{1 9}$ | $\mathbf{2 0}$ | $\mathbf{2 1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ans. | B | C | D | A | A | D | C | A | B | B | C | A | B | A | C | D | A | B | B | A | B |

