PERMUTATIONS:

1) In how many ways can all the letters of the word CHAIR be arranged?

2) In how many ways can be letters of word JSPIDERS be arranged?

3) In how many ways can the letters of the word JSPIDERS be arranged such that all the vowels will come together?

4) In how many ways can the letters of the word JSPIDERS be arranged such that all the vowels should not come together?

5) Four boys and Three girls go out for a picnic. In how many ways can everyone give pose to a photograph such that

a) no two girls will stand together

b) no two boys will stand together

6) There are 6 software engineers and 4 civil engineers has to arrange in a row. Find the number of

a) Total arrangements

b) Arrangement such that all software engineers will be together

c) Arrangement such that all civil engineers will be together

d) Arrangement such that all software engineers should not come together

e) Arrangement such that all civil engineers should not come together

f) Arrangement such that no software engineer should not come together

g) Arrangement such that no civil engineer should not come together

7) For the word CORPORATION. Find

a) Total number of arrangements

b) number of arrangements such that all vowels should come together

c) number of arrangements such that all vowels should not come together

d) no vowels should come together

8) In how many ways you can arrange the letters of the word DELHI ?

9) In how many ways you can arrange the letters of the word DELHI always D will come in third position?

10) How many words can be formed which start with D using the letters of the word DELHI ?

11) How many new words can be formed (or) how many ways can you rearrange the letter of word DELHI?

12) In how many way you can arrange the word PERMUTATION without altering the position of P and N?

13) How many six digit numbers can be formed using the digits 1,2,3,4,5 and 6?

14) How many six digit numbers can be formed using the digits 1,2,3,4,5 and 6 such that repetition of digit is not allowed (or) each digit is being used only once?

15) How many six digit numbers can be formed using the digits 0,1,2,3,4,5 and 6 and repetition is not allowed?

16) How many six digit numbers can be formed which are multiples of 5 using the digits 1,2,3,4,5 and 6 and repetition is not allowed?

17) How many six digit numbers can be formed which are multiples of 5 using the digits 0,1,2,3,4,5 and 6 and repetition is not allowed?

18) How many 6 digit even numbers can be formed which are multiples of 5 using the digits 0,1,2,3,4,5 and 6 and repetition is not allowed?

19) How many 6 digit numbers can be formed such that each digit is being used only once?

COMBINATIONS:

1)In how many ways you can select

(a) Captain (or) Vice-Captain

(b) Captain and Vice-Captain from a cricket team of 11 members?

2) In how many ways you can form a cricket team of 11 members out of 15 players?

3) In how many ways you can form a cricket team of 11 members out of 15 players such that

a) one particular person is always selected

b) one particular person is always not selected

c) Two particular persons are always selected

d) Two particular persons are always not selected

4) In how many ways a committee of 11 members can be formed out of 9 men and 5 women such that

a) Exactly three women should be there

b) Atleast three women

c) Atmost three women

5) In how many ways you can invite atleast 1 of your 9 friends to party?

6) In a party each person has to exchange handshake with other person only once. If the total number of handshakes is 300. How many people were there?

7) How many diagonals are present in pentagon?

8) Number of diagonals is 35, find number of sides (name of the figure)

9) How many words of 4 consonants, 2 vowels using 6 consonants and 5 vowels can be formed?

10) In how many ways, 5 letters in the 3 postboxes can be posted?