Permutations and Combinations

1.In how many ways can the letters of the word 'LEADER' be arranged?

A.72   B.144   C.360   D.720

2.In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?

A.360   B.480   C.720   D.5040

3. In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

A.810   B.1440   C.2880   D.50400

4.In how many different ways can the letters of the word 'THERAPY' be arranged so that the vowels never come together?

A.720   B.1440   C.5040   D.3600

5.In how many ways can the letter of the word 'SCALE' be arranged, so that the vowels do not come together?

A.72   B.36   C.48   D.60

6.In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?

A.32   B.48   C.36   D.60

7.What is the number of ways that 4 boys and 3 girls can be seated so that boys and girls alternate ?

A.120   B.72   C.144   D.12

8.In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?

A.266   B.5040   C.11760   D.86400

9.A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw?

A.32   B.48   C.64   D.96

10.In how many ways, a committee consisting of 4 boys and 3 girls can be formed from a group of 15 boys and 10 girls?

A.172800   B.163800   C.327600   D.152800

11.If 9 teams participate in a double league tournament such as in the FIFA, how many matches will be played in the first phase of league ?

A.72   B.42   C.63   D.81

12.In a tournament, 14 teams play league matches. If each team plays against every other team once only then how many matches are played?

A.105   B.91   C.85   D.78

13.At the end of a meeting all the ten people present shake hands with each other once. The number of handshakes altogether is

A.20   B.45   C.55   D.90

14.There are 15 stations on a Railway line. How many tickets of different station should be printed so that a passenger can buy a ticket of any station from another?

A.210   B.105   C.150   D.none

15.There are four men and three women. In how many ways can they be seated in a row so that all the three women do not sit together.

A.3420   B.4320   C.4230   D.2340