Course: Algebra and Trigonometry

Chapter # 07

Permutation, Combination and Probability

Following short questions are selected from previous 5 years papers of different boards. Solve these at your own to perform well in annual exams.

- 1. Find the number of diagonals of a six sided figure.
- 1. How many arrangements of the letters of the word PAKPATTAN taken all at a time can be made?
- 1. A bag contains 40 balls out of which 5 are green, 15 are black and the remaining are yellow. A ball is taken out of the bag. Find the probability that the ball is yellow.
- 1. Find the value of n if ${}^{n}P_{r} = 11.10.9$
- 1. Evaluate ${}^{20}P_3$.
- 1. Define combination.
- 1. A die rolled. Find the probability that top show dots less than 5.
- 1. Evaluate ${}^{10}C_7$.
- 1. Find the values of n and r, when ${}^{n}C_{r} = 35$, ${}^{n}P_{r} = 210$.
- 1. A coin is tossed four times. Find the probability to get two heads and two tails.
- 1. A natural number is chosen out of first fifty natural numbers. What is the probability that chosen number is multiple of 3 or 5.
- 1. Evaluate $\frac{9!}{6!3!}$.
- 1. In how many ways can 5 boys and 4 girls be seated on a bench so that the girls and the boys occupy alternate seats?
- 1. Evaluate ${}^{20}C_{17}$.
- 1. A die is thrown twice. What is the probability that the sum of the number of dots shown is 3 or 5?
- 1. Find the value of n when ${}^{n}C_{r} = \frac{12.11}{2!}$.
- 1. If $S = \{1, 2, 3, 4, 5\}$, find the probability of numbers multiple of 3.
- 1. There are 5 green balls and 3 red balls in a box. Find the probability of a ball taken out is red?
- 1. Determine the probability of getting 2 heads in two successive tosses of a balanced coin.
- 1. A die is rolled. What is probability that dots on the top are greater than 4?

- 1. How many signals can be given by 5 flags of different colors using 3 flags at a time?
- 1. Find *n* when ${}^{n}C_{6} = {}^{n}C_{12}$.
- 1. How many triangles can be formed by joining the vertices of 5 sided figure?
- 1. Define probability and sample space.

$Best \ of \ Luck$