

Topic: Basics of Combinatorics

Target: PRMO/RMO

DPP -1

- 1. The number of five-digit numbers that contain 7 exactly once is
- 2. A variable name in certain computer language must be either an alphabet or an alphabet followed by a decimal digit. The total number of different variable names that can exist in that language is equal to
- 3. Total number of words that can be formed using all letters of the word BRIJESH that neither begins with I nor ends with B is equal to
- 4. The total number not more than 20 digits that are formed by using the digits 0, 1, 2, 3, and 4 is
- 5. The number of words of four letters containing equal number of vowels and consonants, where repetition is allowed, is
- 6. The number of ways to fill each of the four cells of the table with a distinct natural number such that the sum of the numbers is 10 the sums of the numbers placed diagonally are equal is



- 7. The sum of the digits in the unit's place of all numbers formed with the help of 3, 4, 5, 6 taken all at a time is
- 8. How many numbers can be made with the digits 3, 4, 5, 6, 7, 8 lying between 3000 and 4000, which are divisible by 5 while repetition of any digit is not allowed in any number?

ANSWER KEY

Ques.	1.	2.	3.	4.
Ans.	(41) (9 ³)	286	3720	5 ²⁰
Ques.	5.	6.	7.	8.