ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

Solutions of Worksheet-21

SUBJECT – MATHEMATICS

2nd-term

Chapter: Algebra **Class: XI**

Topic: Permutations **Date: 09 .11.2020**

Choose the correct option **(1 X 15= 15)**

1. **How many different permutations can be made by taking all the letters of the word COMMERCE ?**

   a) 5400
   b) 5040
   c) 5004
   d) 4050

2. **How many different permutations can be made by taking all the letters of the word COSTING so that the vowels are always together ?**

   a) 1450
   b) 1340
   c) 1440
   d) 1404

3. **How many different permutations can be made by taking all the letters of the word ENGINEERING ?**

   a) 277800
   b) 277200
   c) 216800
   d) 228600

4. **How many different permutations can be made by taking all the letters of the word MONDAY ?**

   a) 720
   b) 702
   c) 270
   d) None of these.

5. **Find the rank of the letter MAKE when its letter are arranged as in a dictionary.**

   a) 24
   b) 45
   c) 40
   d) None of these.

6. **Find the rank of the letter LATE when its letter are arranged as in a dictionary.**
   a) 12
   b) 14
   c) 16
   d) None of these.

7. **Find the rank of the letter MOTHER when its letter are arranged as in a dictionary.**

   a) 396
   b) 169
   c) 309
   d) 369

8. **How many different arrangements can be made by taking all the letters of the word COSTING so that the vowels are never together ?**

   a) 35000
   b) 3600
   c) 3700
   d) 3080

9. **How many different arrangements can be made by taking all the letters of the word COSTING so that the vowels may appear in the odd places ?**

   a) 1444
   b) 1044
   c) 1404
   d) 1440

10. **In how many ways can 10 boys and 7 girls be arranged in a row so that no two girls come together ?**

    a) 1040890
    b) 9876000
    c) 9702800
    d) None of these.

11. In how many ways can 3 boys and 5 girls be arranged in a row so that all the 3 boys are together ?

a) 4230
b) 4210
c) 4230
d) 4320

12. How many different arrangements can be made by taking all the letters of the word CONSTANT keeping the two vowels always together ?

a) 2500
b) 2560
c) 2540
d) 2520

13. How many numbers not more than 4 digits can be formed with the digits 1, 2, 3 and 4 , repetitions being allowed ?

a) 340
b) 320
c) 330
d) 310

14. In how many ways can 6 boys form a ring ?

a) 352
b) 350
c) 120
d) 270

15. In how many ways can 6 boys be seated at a round table ?

a) 790
b) 891
c) 720
d) 196

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