Victory Batch

Permutation and Combination

DPP

1. How many numbers greater than 40000 can be formed from the digits 2, 4, 5, 5, 7?

(1) 12 (2) 24

(3) 36 (4) 48

2. In a cricket championship there are 36 matches. The number of teams if each play one match with other are

(1) 8 (2) 9

(3) 10 (4) 36

3. There are 10 true-false questions in an examination. Then these questions can be answered in

(1) 240 ways (2) 20 ways

(3) 1024 ways (4) 100 ways

4. The number of quadratic expressions with the coefficients drawn from the set {0, 1, 2, 3} is

(1) 27 (2) 36

(3) 48 (4) 64

5. 5 Boys & 3 girls are sitting in a row of 8 seats. Number of ways in which they can be seated so that not all the girls sit side by side, is:

(1) 36000 (2) 9080

(3) 11600 (4) 3960

6. How many of the 900 three-digit numbers have at least one even digit?

(1) 775 (2) 875

(3) 450 (4) 750

7. Four dice are rolled. The number of possible out comes in which at least one die show 6 is

(1) 671 (2) 168

(3) 176 (4) 650

8. Number of 3-digit numbers that can be formed having unit digit as zero and repetition of digit is allowed, is

(1) 72 (2) 81

(3) 100 (4) 90

9. How many numbers greater than 50000 can be formed with the digits 4, 5, 6, 7 and 8 if no digit being repeated?

(1) 96 (2) 256

(3) 218 (4) 126

10. If ${}^{k+5}P_{k+1} = \frac{11(k-1)}{2} \cdot {}^{k+3}P_k$, then k is equal to

(1) 6, 7 (2) 4, 5

(3) 7, 8 (4) 1, 2

11. If repetition of digits is not allowed how many numbers of four digits divisible by 5 can be formed with the digits 0, 4, 5, 6, 7

(1) 40 (2) 44

(3) 42 (4) 36

12. The number of different arrangements (permutations) of the letters of the word 'Banana' is

(1) 40 (2) 120

(3) 60 (4) 50

13. There are 6 roads between A and B and 4 roads between B and C.

(i) In how many ways can one drive from A to C by way of B?

(ii) In how many ways can one drive from A to C and back to A, passing through B on both trips?

(iii) In how many ways can one drive the circular trip described in (ii) without using the same road more than once.

14. It repetitions are not permitted,

(i) how many 3-digit numbers can be formed from the six digits 2, 3, 5, 6, 7 and 9.

(ii) how many of these are less than 400.

(iii) how many are even.

(iv) how many are odd.

(v) how many are multiples of 5.

15. A man has 3 jackets, 10 shirts and 5 pair of slacks. If an outfit consists of a jacket, a shirt, and a pair of slacks, the different outfits can the man make, is

(1) 120 (2) 150

(3) 180 (4) 210

Answer Key

1. (4)
2. (2)
3. (3)
4. (3)
5. (1)
6. (1)
7. (1)
8. (4)
9. (1)
10. (1)
11. (3)
12. (3)
13. (i) 24
(ii) 576
(iii) 360
14. (i) 120,
(ii) 40,
(iii) 40,
(iv) 80,
(v) 20
15. (2)