

CA Foundation Maths
Chp 5:- Permutations and Combinations



Time:- 25 mins

1. If ${}^nP_r = 336$ and ${}^nC_r = 56$, then n and r will be
 - (a) (3,2)
 - (b) (8, 3)
 - (c) (7, 4)
 - (d) none of these
2. In how many ways the letters of the word 'ARRANGE' be arranged?
 - (a) 1,200
 - (b) 1,250
 - (c) 1,260
 - (d) 1,300
3. The number of ways in which 8 examination papers be arranged so that the best and worst papers never come together.
 - (a) $8! - 2 \times 7!$
 - (b) $8! - 7!$
 - (c) $8!$
 - (d) $7!$
4. If ${}^nP_4 = 12{}^nP_2$ then $n =$
 - (a) 2
 - (b) 3
 - (c) 4
 - (d) 6
5. A man has 5 friends'. In how many ways can he invite one or more of his friends to dinner?
 - (a) 30
 - (b) 31
 - (c) 32
 - (d) 10
6. In how many ways can a committee of 3 ladies and four gents be chosen from 8 ladies and 7 gents?
 - (a) 1950
 - (b) 1920
 - (c) 1940
 - (d) 1960
7. In how many ways can the letters of the word 'STRANGE' be arranged so that the vowels never come together?
 - (a) 3600
 - (b) 3686
 - (c) 5040
 - (d) 4050

8. A box contains 7 red, 6 white and 4 blue balls. How many selections of three balls one of each colour?
- (a) 178
 - (b) 158
 - (c) 198
 - (d) 168
9. The number of diagonals in a polygon of 6 sides
- (a) 9
 - (b) 8
 - (c) 6
 - (d) 12
10. The number of ways the letters of the word 'COMPUTER' can be rearranged is
- (a) 40,320
 - (b) 40,319
 - (c) 40,318
 - (d) none of these
11. 5 persons are sitting in a round table in such way that Tallest Person is always on the right-side of the shortest person; the number of such arrangements is
- (a) 6
 - (b) 8
 - (c) 24
 - (d) none of these
12. An examination paper with 10 questions consists of 6 questions in Algebra and 4 questions in Geometry. At least one question from each section is to be attempted. In how many ways can this be done?
- (a) 945
 - (b) 100
 - (c) 1000
 - (d) none of these
13. The number of triangles that can be formed by choosing the vertices from set of 12 points, seven of which lie on the same straight line is
- (a) 185
 - (b) 175
 - (c) 115
 - (d) 105
14. How many ways can the letters of the word 'FAILURE' be arranged so that the consonants may occupy only odd places?
- (a) 576
 - (b) 476
 - (c) 376
 - (d) 276

15. ${}^{15}C_{3r} = {}^{15}C_{r+3}$, then r is equal to
- (a) 2
 - (b) 3
 - (c) 4
 - (d) 5
16. How many Six-digit telephone numbers can be formed by using 10 distinct digits
- (a) 10^8
 - (b) 6^{10}
 - (c) ${}^{10}C_9$
 - (d) ${}^{10}P_6$
17. $nC_1 + nC_2 + nC_3 + \dots =$
- (a) 2^{n-1}
 - (b) 2^n
 - (c) 2^{n+1}
 - (d) none of these

