

MATHEMATICS (ASSIGNMENT-11)
TOPIC- PERMUTATIONS AND COMBINATION

- The number of selecting at least 4 candidates from 8 candidates is
a) 270 b) 70 c) 163 d) None of these
- There are 5 roads leading to a town from a village. The number of different ways in which a village can go to the town and return back, is
a) 20 b) 25 c) 5 d) 10
- If ${}^nC_{r-1} = 36$, ${}^nC_r = 84$ and ${}^nC_{r+1} = 126$, then
a) $n = 8, r = 4$ b) $n = 9, r = 3$ c) $n = 7, r = 5$ d) None of these
- The number of ways in which 12 balls can be divided between two friends, one receiving 8 and the other 4, is
a) $\frac{12!}{8!4!}$ b) $\frac{12!2!}{8!4!}$ c) $\frac{12!}{8!4!2!}$ d) None of these
- The number of ways in which one can post 5 letters in 7 letters boxes is
a) 35 b) 7P_5 c) 7^5 d) 5^7
- The number of committees of 5 persons consisting of at least one female member, that can be formed from 6 males and 4 females, is
a) 246 b) 252 c) 6 d) None of these
- There are 10 points in a plane, out of these 6 are collinear. The number of triangles formed by joining these points is
a) 100 b) 120 c) 150 d) None of these
- The number of 4-digit even numbers that can be formed using 0,1,2,3,4,5,6 without repetition is
a) 120 b) 300 c) 420 d) 20
- Three dice are rolled. The number of possible outcomes in which at least one die shows 5 is
a) 215 b) 36 c) 125 d) 91
- The number of ways in which 5 pictures can be hung from 7 picture nails on the wall is
a) 7^5 b) 5^7 c) 2520 d) None of these
- How many words can be formed from the letters of the word DOGMATIC, if all the vowels remain together?
a) 4140 b) 4320 c) 432 d) 43
- How many words can be made from the letters of the word 'COMMITTEE'?
a) $\frac{9!}{(2!)^2!}$ b) $\frac{9!}{(2!)^3!}$ c) $\frac{9!}{2!}$ d) $9!$

13. If the letters of the word 'SACHIN' are arranged in all possible ways and these words are written out as in dictionary, then the word 'SACHIN' appears at serial number
 a) 602 b) 603 c) 600 d) 601
14. Out of 8 given points, 3 are collinear. How many different straight lines can be drawn by joining any two points from those 8 points?
 a) 26 b) 28 c) 27 d) 25
15. How many words can be formed from the letters of the word ARTICLE, if vowels always comes at the odd places?
 a) 60 b) 576 c) $\frac{7!}{3!}$ d) 120
16. 4 buses runs between Bhopal and Gwalior. If a man goes from Gwalior to Bhopal by a bus and comes back to Gwalior by another bus, then the total possible ways are
 a) 12 b) 16 c) 4 d) 8
17. The total number of different combinations of letters which can be made from the letters of the word MISSISSIPPI is
 a) 150 b) 148 c) 149 d) None of these
18. The total numbers of ways of dividing 15 things into groups of 8,4 and 3 respectively is
 a) $\frac{15!}{8!4!(3!)^2}$ b) $\frac{15!}{8!4!3!}$ c) $\frac{15!}{8!4!}$ d) None of these
19. The number of diagonals that can be drawn by joining the vertices of an octagon is
 a) 28 b) 48 c) 20 d) None of these
20. How many even numbers of 3 different digits can be formed from the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 (repetition of digits is not allowed)?
 a) 224 b) 280 c) 324 d) None of these

ANSWER- KEY

- 1. C 2. B 3. B 4. B 5. C 6. A 7. A**
- 8. C 9. D 10. C 11. B 12. B 13. D 14. A**
- 15. B 16. A 17. C 18. B 19. C 20. A**