

ECAT Mathematics Chapter 9 Permutation, Combination & Probability

| Sr | Questions | Answers Choice |
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| 1 | The value of n, when ${}^n P_2 = 20$ is | A. 3 B. 4 C. 6 D. 5 |
| 2 | Product of any n consecutive positive integers is divisible by | A. n B. \sqrt{n} C. n! D. None |
| 3 | A bag contains 5 white, 7 red and 5 black balls. If four balls are drawn one by one with replacement, the probability that none is white is | A. $(11/16)^2$ B. $(5/16)^2$ C. $(11/16)^4$ D. $(5/16)^4$ |
| 4 | Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is | A. 3 / 17 B. 5 / 17 C. 7 / 17 D. 9 / 17 |
| 5 | In school there are 150 students Out of these 80 students enrolled for mathematics class 50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time Find the number of students who have taken both physics and mathematics. | A. 40 B. 30 C. 50 D. 20 |
| 6 | A key ring is an example of | A. Permutation B. Circular permutation C. Combination D. None |
| 7 | The probability that a slip of number divisible by 4 is picked from the slips bearing numbers 1, 2, 3, ...10 is | A. 1/5 B. 1/4 C. 1/3 D. 1/2 |
| 8 | The number of the diagonals of a 6 sided figure is | A. 15 B. 21 C. 9 D. 6 |
| 9 | Three numbers are chosen random without replacement from {1, 2, 3, ..., 10}. the probability that minimum of the chosen numbering is 3 or their maximum is 7 | A. 7 / 40 B. 5 / 40 C. 11 / 40 D. None of these |
| 10 | For a positive integer n | A. $n! = n(n + 1)$ B. $n! = n(n+1)!$ C. $n! = n(n - 1)$ D. $n! = n(n - 1)!$ |
| 11 | In a country 55% of the male population has houses in cities while 30% have houses both in cities and in villages find the percentage of the population that has houses only in villages | A. 45 B. 30 C. 25 D. 50 |
| 12 | ${}^n C_{n-r}$ is equal to | A. n! B. $n-1C_r$ C. nC_r D. None of these |
| 13 | The probability that the sum of dots appearing in two successive thrown of two dice, in every time 7 is | A. 1/5 B. 1/36 C. 1/7 D. 1/63 |
| 14 | There are 25 tickets bearing number from 1 to 25. One ticket is drawn at random. The probability that the number on it is a multiple of 5 or 6 is | A. 7 / 25 B. 9 / 25 C. 11 / 25 D. None of these |
| 15 | Three dice are thrown together. The probability of getting a total of at least 6 is | A. 103 / 108 B. 10 / 216 C. 93 / 108 D. ... |

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| | | D. None of these |
| 16 | The factorial of a positive integers is a (an) | A. Rational number B. Positive integer C. Real number D. None |
| 17 | The sum if 1,3,5,7,9..... up to 20 terms is | A. 400 B. 472 C. 563 D. 264 |
| 18 | How many arrangements of the letters of the word MATHEMATICS can be made | |
| 19 | When a selection of object is made without paying regard to the order of selection, it is called | A. Sequence B. Series C. Combination D. Permutation |
| 20 | 9. 8. 7. 6= _____ | |