

ECAT Mathematics Chapter 9 Permutation, Combination & Probability

Sr	Questions	Answers Choice
1	The probability that a person A will be alive 15 years hence is $\frac{5}{7}$ and the probability that another person B will be alive 15 years hence is $\frac{7}{9}$. Find the probability that both will be alive 15 years hence	A. $\frac{4}{63}$ B. $\frac{5}{9}$ C. $\frac{45}{49}$ D. None of these
2	Question Image	
3	Cycle tyres are supplied in lots of 10 and there is a chance if 1 in 500 tyres to be defective. Using Poisson distribution, the approximate number of lots containing no defective tyre in a consignment of 10, 0000 lots is	A. 9028 B. 9208 C. 9802 D. 9820
4	A bag contains 7 whit, 5 black and 4 rd balls. If two balls are drawn at random from the bag, the probability that they are not of the same color is	A. $\frac{73}{120}$ B. $\frac{83}{120}$ C. $\frac{67}{120}$ D. $\frac{43}{120}$
5	The domain of a finite sequence is a	A. Set of natural numbers B. R C. Subset of N D. Proper subset of N
6	Which one is not defined $\forall n \in \mathbb{Z}^+$	A. $-n!$ B. $n!$ C. $(-n)!$ D. $n!+0!=n!+1$
7	Number of combination of zero or more things out of n different things	A. nP_n B. nPr C. nCr D. 2^n
8	For two events A and B if $P(A) = P(A/B) = \frac{1}{4}$ and $P(B/A) = \frac{1}{2}$, then	A. A is sub-event of B B. A and B are mutually exclusive C. A and B are independent and $P(A/B) = \frac{3}{4}$ D. None of these
9	Question Image	
10	How many arrangements of the letters of the word MISSISSIPPI, taken all together can be made?	
11	A sequence is a function whose domain is	A. N B. Subset of N C. R D. None of these
12	Question Image	A. $n!$ B. $0!$ C. 1 D. None of these
13	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
14	A coin is tossed. If head comes up, a die is thrown but if tail comes up, the coin is tossed again. The probability of obtaining a head and an even number is	A. $\frac{1}{8}$ B. $\frac{2}{8}$ C. $\frac{3}{8}$ D. None of these
15	How many arrangements of the letters of the word ADDING can be made	
16	A box contains 10 red 30 white and 20 black marbles When a marble is drawn at random the probability that it is either red or white is	A. $\frac{1}{6}$ B. $\frac{1}{3}$ C. $\frac{1}{2}$ D. $\frac{2}{3}$
17	Question Image	A. $\frac{5}{12}$ B. $\frac{3}{8}$ C. $\frac{5}{8}$ D. $\frac{7}{4}$

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- 18 The key for opening a door is in a bunch of 10 keys. A man attempts to open the door by trying the keys at random discarding the wrong key. The probability that the door is opened in the 5th trial is
- A. $1/10$
B. $2/10$
C. $3/10$
D. $4/10$
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- 19 The domain of an infinite sequence is a
- A. Set of natural numbers
B. \mathbb{R}
C. Subset of \mathbb{N}
D. None of the above
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- 20 The number of ways of arranging the letter AAAAA BBB CCC D EE F in a row when no two C's are together is
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