


## ECAT Pre General Science Mathematics Chapter 9 Permutation, Combination & Probability Online Test

Sr	Questions	Answers Choice
1	$n!/(n-1)! =$	A. n B. n! C. (n-1)! D. 0!
2	Two coins are tossed twice each. The probability that the head appears on the first toss and the same faces appear in the two tosses is	A. 1/4 B. 1/2 C. 1/3 D. 1/7
3	The probability that the sum of dots appearing in two successive throw of two dice, in every time 7 is	A. 1/5 B. 1/36 C. 1/7 D. 1/63
4	A die is thrown, the probability that the dots on the top are prime numbers or odd numbers is	A. 1/2 B. 2/3 C. 1/3 D. 2/5
5	A die is rolled. What is the probability that the dots on the top are greater than 4?	A. 1/4 B. 1/2 C. 1/3 D. 1/33
6	A class contains nine boys and three girls, in how many ways can the teacher choose a committee of four?	A. 60 B. 460 C. 495 D. 272
7	What is the probability of being born on Wednesday?	A. 1/7 B. 1/2 C. 1/3 D. 1/8
8	There are 16 points in a plane, in which 6 are collinear. how many lines can be drawn by joining these points?	A. 10 B. 66 C. 71 D. 106
9	Cycle tyres are supplied in lots of 10 and there is a chance of 1 in 500 tyres to be defective. Using Poisson distribution, the approximate number of lots containing no defective tyre in a consignment of 10,000 lots is	A. 9028 B. 9208 C. 9802 D. 9820
10	Three integers are chosen at random from the first 20 integers. Then probability that their product is even, is	A. 2 / 19 B. 3 / 29 C. 17 / 19 D. 4 / 19
11		A. 5 / 12 B. 3 / 8 C. 5 / 8 D. 7 / 4
12	A die is thrown 100 times. If getting an odd number is considered a success, the variance of the number of successes is	A. 50 B. 25 C. 10 D. 100
13	A and B throw a dice. The probability that A's throw is not greater than B's is	A. 5 / 12 B. 7 / 12 C. 1 / 6 D. 1 / 2
14	Given two independent events A and B such that $P(A) = 0.30$ and $P(B) = 0.60$ . Probability of getting neither A nor B is	A. 0.28 B. 0.13 C. 0.12 D. 0.42
15	For two events A and B if $P(A) = P(A/B) = 1/4$ and $P(B/A) = 1/2$ , then	A. A is sub-event of B B. A and B are mutually exclusive C. A and B are independent and $P(A \cap B) = 1/8$ D. A and B are mutually exclusive and $P(A \cap B) = 1/8$

		$P(A/B) = \frac{3}{4}$ D. None of these
16	A box containing 10 mangoes out of which 4 are rotter. Two mangoes are taken together from the box. If one of them is found to be good, the probability that the other is also good is	A. $\frac{1}{3}$ B. $\frac{8}{15}$ C. $\frac{5}{13}$ D. $\frac{5}{9}$
17	An experiment yields 3 mutually exclusive and exhaustive events A, B, C, if $P(A) = 2$ and $P(B) = 3$ . then $P(C) =$	A. $\frac{1}{11}$ B. $\frac{2}{11}$ C. $\frac{3}{11}$ D. $\frac{6}{11}$
18	A card is drawn from a pack of cards numbered 2 to 53. the probability that the number on the card is prime number less than 20 is	A. $\frac{2}{13}$ B. $\frac{4}{13}$ C. $\frac{5}{13}$ D. $\frac{8}{13}$
19	Out of 10, 000 families with 4 children each, the number of families all of whose children are daughters is	A. 375 B. 500 C. 625 D. 150
20	A combination lock on a suitcase has 3 wheels each labeled with nine digits from 1 to 9. If an opening combination is a particular sequence of three digits with no repeats, the probability of a person guessing the right combination is	A. $\frac{1}{500}$ B. $\frac{1}{504}$ C. $\frac{1}{252}$ D. $\frac{1}{250}$
21	A machine operates if all of its three components function. The probability that the first component fails during the year is 0.14, the second component fails is 0.10 and the third component fails is 0.05. the probability that the machine will fail during the year is	A. 0.2647 B. 0.2692 C. 0.3647 D. None of these
22	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. $\frac{1}{10}$ B. $\frac{2}{10}$ C. $\frac{3}{10}$ D. $\frac{4}{10}$
23	Five engineering, four mathematics, two chemistry books are placed on a table at random. The probability that the books of each kind are all together is	
24	If two balls are drawn from a bag containing 3 white, 4 black and 5 red balls. Then the probability that the drawn balls are of different colours is	A. $\frac{1}{66}$ B. $\frac{3}{66}$ C. $\frac{19}{66}$ D. $\frac{47}{66}$
25	The probability of getting a number between 1 and 100 which is divisible by 1 and itself if only is	A. $\frac{1}{4}$ B. $\frac{1}{2}$ C. $\frac{3}{4}$ D. $\frac{25}{98}$
26	Out of 40 consecutive natural numbers, two are chosen at random. Probability that the sum of the numbers is odd, is	A. $\frac{14}{29}$ B. $\frac{20}{39}$ C. $\frac{1}{2}$ D. n
27	Three numbers are chosen random without replacement from $\{1, 2, 3, \dots, 10\}$ . the probability that minimum of the chosen numbering is 3 or their maximum is 7	A. $\frac{7}{40}$ B. $\frac{5}{40}$ C. $\frac{11}{40}$ D. None of these
28	A committee consists of 9 experts taken from three institutions A, B, and C, of which 2 are from, A, 3 from B and 4 from C. If three experts resign, then the probability that they belong to different institutions is	A. $\frac{1}{729}$ B. $\frac{1}{24}$ C. $\frac{1}{21}$ D. $\frac{2}{7}$
29	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. $(\frac{11}{16})^2$ B. $(\frac{5}{16})^2$ C. $(\frac{11}{16})^4$ D. $(\frac{5}{16})^4$
30	Two cards are drawn at random without replacement. the probability that the first is a king and second is not a king is	A. $\frac{48}{663}$ B. $\frac{24}{663}$ C. $\frac{12}{663}$ D. None of these