

ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	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. $1/729$ B. $1/24$ C. $1/21$ D. $2/7$
2	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. $(5/16)^4$
3	Two cards are drawn at random without replacement. the probability that the first is a king and second is not a king is	A. $48/663$ B. $24/663$ C. $12/663$ D. None of these
4	A bag contains 7 white, 5 black and 4 red balls. If two balls are drawn at random from the bag, the probability that they are not of the same color is	A. $73/120$ B. $83/120$ C. $67/120$ D. $43/120$
5	Question Image	A. $1/2$ B. $1/3$ C. $1/4$ D. None of these
6	Question Image	
7	Question Image	A. 1.5 B. 1.2 C. 8 D. None of these
8	Question Image	A. 0.9 B. 0.74 C. 0.2016 D. None of these
9	An integer is chosen at random from the number ranging from 1 to 50. the probability that the integer chosen is a multiple of 2 or 3 or 10 is	A. $3/10$ B. $5/10$ C. $7/10$ D. $9/10$
10	Eight chairs are numbered 1 to 8. Two women and three men wish to occupy one chair each. First, the women choose the chairs from amongst the chairs marked 1 to 4 and then the men select the chairs from amongst the remaining. The number of possible arrangement is	A. ${}^6P_3 \times {}^4C_2$ B. ${}^4P_2 \times {}^4C_3$ C. ${}^4P_2 \times {}^4P_3$ D. None of these
11	There are n seats round a table numbered 1, 2, 3 n. The number of ways in which m person can take seats is	A. nP_m B. ${}^nC_m \times (m-1)!$ C. ${}^{n-1}P_m$ D. None of these
12	Fifteen girls compete in a race. The first three places can be taken by them in	A. 3! ways B. 12! ways C. $15 \times 14 \times 13$ ways D. 42 ways
13	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	
14	Number of permutations of n distinct objects taken r ($r < n$) at a time which exclude 3 ($< n$) particular objects is	A. $3! P(n, r-3)$ B. $P(n, 3) P(n, r-3)$ C. $P(r, r) P(n, r-3)$ D. $P(n-3, r)$
15	The number of significant numbers which can be formed by using any number of the digits 0, 1, 2, 3, 4 but using each not more than once in each number is	A. 260 B. 356 C. 410 D. 96

16	All letters of the word "AGAIN" are permuted in all possible ways and the words so formed (with or without meaning) are written as in dictionary, then the 50th word is	A. NAAGI B. NAAIG C. IAANG D. INAGA
17	If $4 {}^6P_r = {}^6P_{r+1}$, then r is equal to	A. 4 B. 3 C. 2 D. 1
18	Riaz, Saba, Maria, Shehzad are to give speeches in a class. The teacher can arrange the order of their presentation in	A. 4 ways B. 12 ways C. 256 ways D. 24 ways
19	The value of n, when ${}^nP_2 = 20$ is	A. 3 B. 4 C. 6 D. 5
20	In a class of 100 students, 60 drink tea, 50 drink coffee and 30 drink both. A student from his class is selected at takes at last one of 2 drinks is	A. 2 / 5 B. 3 / 5 C. 4 / 5 D. None of these
21	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
22	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. None of these
23	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
24	Two unbiased dice are thrown. The probability that the total score is > 5 is	A. 1 / 18 B. 7 / 18 C. 13 / 18 D. 11 / 18
25	5 unbiased coins coins are tossed simultaneously. The probability of getting at least one head is	A. 1 / 32 B. 31 / 32 C. 1 / 16 D. None of these
26	Four cards are drawn at random from a pack of 52 playing cards. The probability of getting all the four cars of the same suit is	A. 44/4165 B. 22/4165 C. 11/4165 D. None of these
27	Six boys and 3 girls are to be seated at random, in a row, for a photograph. The probability that no two girls will sit together is	A. 1/12 B. 1/6 C. 5/12 D. 7/12
28	Form a group of 5 men and 3 women, a committee of 4 persons is to be selected randomly. The probability that there is a majority of men is	A. 1/4 B. 1/3 C. 1/2 D. 1/6
29	A bag contains 3 white, 4 black and 2 red balls. If 2 balls are drawn at random, then the probability that both the ball are white is	A. 1/18 B. 1/12 C. 1/36 D. None of these
30	A card is drawn from a pack of cards numbered 1 to 52, the probability that the number on the card is a perfect square is	A. 1/13 B. 2/13 C. 7/52 D. None of these