

Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	Number of selections of n different things out of n	A. 1 B. nPr C. $n!$ D. nPr
2	The number of 5-digit number that can be formed from the digits 1,2,4,6,8, when 2 and 8 are never together is	A. 72 B. 48 C. 144 D. 20
3	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. $1/6$ B. $1/3$ C. $1/2$ D. $2/3$
4	The number of permutation that can be formed from the letters of the word OBJECT is	A. 700 B. 600 C. 720 D. 620
5	If A is an event then which of the following is true	A. $P(A) < 0$ B. $0 \leq P(A) \leq 1$ C. $P(A) > 0$ D. None
6	probability of a certain event is	A. 0 B. -1 C. 1 D. ∞
7	Product of any n consecutive positive integers is divisible by	A. n B. $\sqrt{n}$ C. $n!$ D. None
8	The probability that a slip of numbers divisible by 4 is picked from the slips of number 1,2,3,4,.....10 is	A. $1/5$ B. $2/5$ C. $1/10$ D. $3/10$
9	If S is a sample space and event set $E = \Phi$ then $P(E)$ is	A. > 0 B. 1 C. < 1 D. 0
10	If S is a sample space and event set $E = S$ then $P(E)$ is	A. > 0 B. 1 C. < 1 D. 0
11	The number of combinations of 10 different objects taken 8 objects at a time is	A. 90 B. 45 C. 55 D. 50
12	$nCn-r$ is equal to	A. $n!$ B. $n-1Cr$ C. nCr D. None of these
13	If A and B are two disjoint events then	A. $P(A \cup B) = P(A) + P(B)$ B. $P(A \cup B) = P(A) - P(A \cap B)$ C. $P(A \cup B) = P(A) \text{ or } P(B)$ D. None
14	An event having more than one sample point is called	A. Certain event B. Compound event C. Simple event D. None
15	How many terms of the A.P 3,6,9,12,15.....must be taken to make the sum 108	A. 8 B. 6 C. 7 D. 36

16	Arithmetic mean between 14 and 18 is	A. 16 B. 17 C. 15 D. 32
17	The sum of all even numbers less than 100 is	A. 2450 B. 2352 C. 2272 D. 2468
18	The sum of all positive integral multiple of 5 less than 100 is	A. 950 B. 760 C. 1230 D. 875
19	The sum of all odd numbers between 100 and 200 is	A. 6200 B. 7500 C. 6500 D. 3750
20	The sum if 1,3,5,7,9..... up to 20 terms is	A. 400 B. 472 C. 563 D. 264
21	The sides of a right angled triangle are in A.P The ratio of sides is	A. 1:2:3 B. 3:4:5 C. 2:3:4 D. 5:8:3
22	The nth term of an A.P is $(3n+5)$ Its 75th term is	A. 26 B. 7 C. 21 D. Cannot be determined
23	The 5th and 13th terms of an A.P are 5 and -3 respectively The first term of the A.P is	A. 1 B. -15 C. 9 D. 2
24	Which term of the A.P 5,8,11,14.....is 320	A. 104th B. 106th C. 105th D. 64th
25	The sum of all 2 digit number is	A. 4750 B. 3776 C. 4895 D. 4905
26	The sum of first 60 natural numbers is	A. 1830 B. 3660 C. 1640 D. 1770
27	How many numbers are there between 103 and 750 which are divisible by 6	A. 125 B. 107 C. 108 D. 113
28	For an A.P common difference d	A. Can be zero B. May or may not zero C. Cannot be zero D. None of these
29	For an arithmetic series to be convergent it is necessary that the series has	A. Finite terms B. $d \leq 0$ C. Infinite terms D. None of these
30	An infinite arithmetic series is always	A. Convergent B. Oscillatory C. Divergent D. None of these