Mathematics ECAT Pre Engineering Chapter 10 Mathematical Inductions Online Test

Sr	Questions	Answers Choice
1	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
2	The first three terms in the expansion of $(1 - x)^{-3}$ are	A. 1 + 3x + 6x² B. 1 - 3x + 6x² C. -3 - 3x - 6x² D. 1 - 3x - 6x²
3	The first three terms in the expansion of $(1 - x)^{-2}$ are	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 - 2x +3x²
4	The first three terms in the expansion of $(1 - x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x +x² D. 1 - x + x²
5	The first three terms in the expansion of $(1 + x)^{3}$ are	A. 1 + 3x +6x² B. 1- 3x + 6x²\ C. -3 -3x -6x² D. 1- 3x -6x²
6	The first three terms in the expansion of $(1 + x)^{-2}$ are _____	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 -2x + 3x²
7	The first three terms in the expansion of $(1 + x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x + x² D. 1 - x + x²
8	The sum of coefficients in the binomial expansion equals to	A. 2 B. 2ⁿ⁺¹ C. 2ⁿ⁻¹ D. 2ⁿ
9	Question Image	A. Even B. Odd C. Prime D. None of these
10	Question Image	A. 2 B. 7 C. 8 D. 12
11	In the expansion of $(a + x)^{n}$ the general term T_{r+1} is	
12	a + x is _____	A. A trinomial B. A binomial C. A monomial D. None of these
13	If n is any positive integer then $n! > n^{2}$ for	
14	If a statement S(n) is true for n = 1 and the truth of S(n) for n = k implies the truth of S(n) for = k + 1, then S(n) is true for all	A. Real numbers n B. Integers n C. Positive integers n D. None of these
15	If n is any positive integer then $n^{2} > n + 3$ for	
16	If n is any positive integer then $n! > 2^{n-1}$ for	
17	1+3x+6x2 +10x3 +....=	A. (1+x)-3 B. (1-x)-2 C. (1-x)-3 D. (1+x)-2
		A. (r-1)th term

18	The general term in the expansion of (a+x)n is	B. (r+1)th term C. rth term D. none
19	If the sum of even coefficients in the expansion of (1+x)n is 128 then	A. n=7 B. n=9 C. n=8 D. None
20	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
21	The third term in the expansion of (1+2x) is	A. -2x2 B. -4x2 C. 2x2 D. 4x2
22	If n∈Z+ then(a+x)n is a/an	A. Finite series B. Convergent series C. Infinite series D. Divergent series
23	The proposition S(k+1) is true when _____ is true∀K∈N	A. S(n) B. S(k) C. S(1) D. S(k-1)
24	If x+y+z+.....+2n = 2n+1-1∀n∈W,then cube root of xyz is equal to	A. 1 B. 4 C. 2 D. 8
25	The exponent of x in 10th term in the expansion of (a+x)n	A. 10 B. 12 C. 11 D. 9
26	In the expansion of (x+y)n the coefficient of 5th and 12th terms are equal then n=	A. 12 B. n=14 C. 17 D. n=15
27	The last term of (1+2x)-2	A. (-1)-2 (2x)-2 B. (-1)-4(-2x)-2 C. (-1)-3(2x)-3 D. Does not exist
28	The no of term is the expansion of (a+x)n-1 is	A. n+1 B. n-1 C. n D. n-2
29	There are two middle terms in the expansion of (a+x)n if n is	A. Even +ve integer B. +ve integer C. Odd +ve integer D. All
30	The coefficient of xn in the expansion of (1-x)-1 is	A. (-1)n2n B. 1 C. (-1)n(n+1) D. (n+1)