ECAT Mathematics Chapter 10 Mathematical Inductions Online Test

Sr	Questions	Answers Choice
1	If the sum of co-efficient in the expansion of $(a+b)^n$ is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
2	If the sum of co-efficient in the expansion of $(a+b)^n$ is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
3	The positive integer just greater than $(1+0.0001)^{10000}$ is	A. 4 B. 5 C. 2 D. 3
4	Question Image	
5	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
6	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
7	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
8	Question Image	A. ¹⁰C₆ B. ¹⁰C₅ C. ¹⁰C₄ D. None
9	If in the expansion of $(1+x)^n$, co-efficients of 2nd, 3rd and 4th terms are in A.P., then x=	A. 4 B. 5 C. 6 D. 7
10	The expansion of $(1 - 3x)^{-1}$ is valid if	A. | x | < 1 B. | x | < 3 C. | x | < 1/3 D. None of these
11	The expansion of $(1 + 2x)^{-2}$ is valed if	A. | x | < 1/2 B. | x | < 1 C. | x | < 2 D. | x | < 3
12	If $\| x \| < 1$, then the first two terms of $(1 - x)^{1/2}$ are	
13	Question Image	A. 8 B. 9 C. 10 D. 11
14	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
15	The sum of the even coefficients in the expansion $(1 + x)^n$ is	A. n² B. 2ⁿ⁻² C. 2ⁿ⁻¹ D. 2ⁿ
16	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd term B. 3rd term C. 4th term D. 5th term
17	The number of terms in the expansion of $(a + x)^{12}$ is	A. 13 B. 12 C. 11

		D. 10
18	$(1 - x)^3$= _____	A. 1 + 3x + 3x²+ x³ B. 1 + x + x²+ x³ C. 1 - x + x²- x³ D. 1 - 3x + 3x²- x³
19	$(1 + 2x)^4$= _____	A. 1 + 4x + 6x²+ 4x³+ x⁴ B. 1 - 4x + 6x²- 4x³+ x⁴ C. 1 - 8x + 24x²- 32x³+ 16x⁴ D. 1 + 8x+ 24x²+ 32x³+ 16x⁴
20	If n is any positive integer then $2^n > 2(n + 1)$ is true for all	
21	If n is any positive integer then $4^n > 3^n + 4$ is true for all	
22	If n is any positive integer then 3 + 6 + 9 + ...+ 3n = _____	
23	If a statement S(n) is true for n = i where i is some natural number and the truth of S(n) for n = k > i implies the truth of S(n) for n = k +1 then S(n) is true for all positive integers	
24	The middle term in the expansion of $(a + x)^{12}$is	A. 7th B. 8th C. 9th D. 6th
25	The sum of the coefficient in the expansion of $(a + x)^5$is	A. 32 B. 16 C. 8 D. 5
26	The sum of the odd coefficients in the expansion of $(a + x)^4$is	A. 14 B. 12 C. 8 D. 4
27	The sum of even coefficient in the binomial expansion is	A. 2ⁿ⁺¹ B. 2ⁿ C. 2ⁿ⁻¹ D. 2n
28	If n is odd then the middle terms in the expansion of $(a + x)^n$are	
29	In the expansion of $(a + x)^n$the sum of exponents of a and x in each term of the expansion is	A. n + 1 B. n - 1 C. n D. 2n
30	The number of terms in the expansion of $(a + b)^9$is	A. 10 B. 11 C. 9 D. 12