ECAT Mathematics Chapter 10 Mathematical Induction

Sr	Questions	Answers Choice
1	If n is any positive integer then $n! > n^2$ for	
2	The fifteenth term of $(3-a)^{15}$ is	A. -17a¹² B. -945a¹³ C. -941a¹³ D. -515a¹²
3	If n∈Z+ then(a+x)n is a/an	A. Finite series B. Convergent series C. Infinite series D. Divergent series
4	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
5	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
6	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
7	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
8	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
9	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
10	If the expansion of $(1 + x)^{20}$, then co-efficient of rth ad (r + 4)th term are equal, then r is	A. 7 B. 8 C. 9 D. 10
11	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
12	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
13	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
14	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
15	Question Image	A. Even B. Odd C. Prime D. None of these
16	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1

		D. None
17	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
18	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
19	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
20	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