ECAT Mathematics Chapter 10 Mathematical Inductions

Sr	Questions	Answers Choice
1	The positive integer just greater than $(1+0.0001)^{10000}$ is	A. 4 B. 5 C. 2 D. 3
2	There is no integer n for which 3n is	A. Even B. Prime C. Odd D. Real
3	The expansion of $(1 - 3x)^{-1}$ is valid if	A. | x | < 1 B. | x | < 3 C. | x | < 1/3 D. None of these
4	The no of term is the expansion of (a+x)n-1 is	A. n+1 B. n-1 C. n D. n-2
5	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
6	If the 4th term in the expansion of $(px + x^{-1})^m$ is 2.5 for all $x \in R$, then	
7	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
8	If n is any positive integer then $n! > n^2$ for	
9	The expansion of $(1 + 2x)^{-2}$ is valed if	A. | x | < 1/2 B. | x | < 1 C. | x | < 2 D. | x | < 3
10	In the expansion of $(a + x)^n$ the general term T_{r+1} is	
11	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
12	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
13	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
14	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
15	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
16	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
17	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8

18	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
19	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
20	Question Image	A. n < 8/5 B. n < 5/8 C. |n| < 8/5 D. |n|>8/5