ECAT (Pre-Eng) Mathematics Chapter 10 Mathematical Inductions

Sr	Questions	Answers Choice
1	The coefficient of xn in the expansion of (1-2x)-1 is	A. (-1)n2n B. 2n C. (-1)(n+1)xr D. (n+1)2n
2	If $(1+x)^n=C_0+ C_1x +C_2x^2+ .....+C_nx^1$then $C_0C_2+ C_1C_3+ C_2C_4+ .....+C_{n-2}C_n=$	
3	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
4	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
5	If $(1+x-2x^3)^6= 1+a_1x + a_2x^2+ a_3x^3+ .....$ the the value of $a_2+ a_4+ a_6+ .....+a_{12}$will be	A. 32 B. 31 C. 64 D. 1024
6	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
7	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
8	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
9	If $\|x\| < 1$, then the first two terms of $(1 - x)^{1/2}$are	
10	Number of terms in the expansion of $(a+x)^n$is	A. n - 1 B. n + 1 C. n + 2 D. n + 3
11	The middle term of the expansion $(1 + 2x)^6$is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
12	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)
13	For all positive integral value of n,3^n< n! , when	A. n> 6 B. n< 6 C. n<11 D. n>11
14	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
15	1st four terms of the expansion $(1-x)^{-2}$are	A. 1 + 2x + 3x²+ 4x³ B. 3x²+ 2x + 1 C. 1 + 3x + 4x²+ 5x³ D. None of these
16	The middle term in the expansion of $(a +x)^{12}$is	A. 7th B. 8th C. 9th

		D. 6th
17	The sum of the coefficient in the expansion of $(a + x)^5$ is	A. 32 B. 16 C. 8 D. 5
18	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
19	If n is any positive integer then $n^2 > n + 3$ for	
20	The greatest integer which divides the number $101^{100} - 1$ is	A. 100 B. 1000 C. 10000 D. 100000