

## ECAT Mathematics Chapter 10 Mathematical Induction

Sr	Questions	Answers Choice
1	The first three terms in the expansion of $(1 + x)^3$ are	A. 1 + 3x +6x <sup>2</sup> B. 1- 3x + 6x <sup>2</sup> C3 -3x -6x <sup>2</sup> D. 1- 3x -6x <sup>2</sup>
2	The sum even binomial coefficient of (3+2x)5 isterm	A. 16 B. 30 C. 8 D. 32
3	If nis positive integers, then 2 <sup>n</sup> >2n+1, only when	A. n≤ 3 B. n≥ 3 C. n≤ 2 D. n≤ 1
4	If n is odd then the middle terms in the expansion of $(a + x)^n$ are	
5	The first three terms in the expansion of $(1 - x)^{-2}$ are	A. 1 - 2x + 3x <sup>2</sup> B. 1 - 2x - 3x <sup>2</sup> C. 1 + 2x + 3x <sup>2</sup> D2 - 2x +3x <sup>2</sup>
6	The proposition $S(n)$ for any $n \in N$ is only true if $k \in N$ and	A. S(k +1) is true B. S(1) is true and S(k+1) is true whenever S (k) is true C. S(k+1) is true whenever S (k) is true D. S(k) is true
7	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
8	The number of terms in the expansion of $(a + x)^{12}$ is	A. 13 B. 12 C. 11 D. 10
9	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
10	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
11	The exponent of x in 10th term in the expansion of (a+x)n	A. 10 B. 12 C. 11 D. 9
12	(0.90) <sup>1/2</sup> is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
13	(0.90) <sup>1/2</sup> is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
14	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
15	Question Image	5.0
16	For≥ -2 , 1+3+5++(2n+5)	A. (n+2) <sup>2</sup> B. (n-2) <sup>2</sup>
	, ,	C. 2n+1

		D. (n+3) <sup>2</sup>
7	The coefficient of $x^{10}$ in the expansion $(x^3+3/x^2)^{10}$ is	A. 1700 B. 17023 C. 17027 D. 17010
8	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
9	Question Image	A. n < 8/5 B. n < 5/8 C.  n  < 8/5 D.  n >8/5
)	If the sum of co-efficient in the expansion of (a+b) <sup>n</sup> is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924