ECAT Mathematics Chapter 10 Mathematical Inductions Online Test

Sr	Questions	Answers Choice
1	For each natural number n, n (n+1) is	A. an even B. an odd C. multiple of 3 D. Irrational
2	There is no integer n for which 3^n is	A. Odd B. even C. Natural D. Prime
3	If n is add the expansion $(a + x)^n$has middle terms	A. 2 B. 3 C. 4 D. 5
4	The middle term of the expansion $(1 + 2x)^6$is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
5	The expansion $(1 + x)^{-3}$holds when	A. |x| > 1 B. |x| < 1 C. x < 1 D. x > 1
6	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
7	$^nC_2$= exists when n is _____	
8	Question Image	A. n < 8/5 B. n < 5/8 C. |n| < 8/5 D. |n|>8/5
9	Number of terms in the expansion of $(a+x)^n$is	A. n - 1 B. n + 1 C. n + 2 D. n + 3
10	Question Image	A. Imaginary B. Rational C. Irrational D. Real numbers
11	$(0.90)^{1/2}$is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
12	Question Image	
13	$(0.90)^{1/2}$is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
14	The term involving x^4in the expansion of $(3 - 2x)^7$is	A. 120 B. 1512 C. 1250 D. 15120
15	$(51)^4$is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
16	$7^{2n}+ 3^{n-1}. 2^{3n-3}$is divisible by	A. 24 B. 25 C. 9

		D. 13
17	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
18	When we expand $(a + 2b)^5$then	A. a⁵+ 10a⁴b + 40a³b²+ 80a²b³+ 80ab⁴+ 32b⁵ B. a⁵+ a⁴b + a³b²+ a²b³+ ab⁴+ b⁵ C. 5a⁵+ 4a⁴b + 3a³b²+ 2a²b³+ 1 ab⁴+ b⁵ D. None
19	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
20	Question Image	A. 3/8 B. 7/8 C. 1/8 D. None
21	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
22	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
23	The greatest integer which divides the number 101^{100}- 1 is	A. 100 B. 1000 C. 10000 D. 100000
24	If $(1+x)^n=C_0+ C_1x +C_2x^2+$ .....+C_nx^1then $C_0C_2+ C_1C_3+ C_2C_4+$ .....+$C_{n-2}C_n$=	
25	Question Image	A. ab=-1 B. ab = 1 C. ab = 2 D. None
26	If the 4th term in the expansion of $(px + x^{-1})^m$is 2.5 for all x $\in R$, *then*	
27	The greatest term in the expansion of $(3+2x)^9$, when x=1 is	A. 4th B. 4th and 5th C. 5th D. 6th
28	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
29	Digit in the unit place of the number 183! + 3^{183}	A. 7 B. 6 C. 3 D. 0
30	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