

ECAT (Pre-Eng) Mathematics Chapter 10 Mathematical Inductions

Sr	Questions	Answers Choice
1	The first three terms in the expansion of $(1 + x)^{-1}$ are	A. $1 + x + x^2$ B. $1 - x - x^2$ C. $-1 - x + x^2$ D. $1 - x + x^2$
2	The 8th term of $(1+2x)^{-1/2}$ is	A. $-221/16 x^7$ B. $-225/18 x^7$ C. $-407/9 x^3$ D. $-429/16 x^7$
3	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
4	Question Image	A. $\binom{n}{r}$ B. $\binom{n+1}{r+1}$ C. $\binom{n}{r+1}$ D. None
5	If the sum of even coefficients in the expansion of $(1+x)^n$ is 128 then	A. $n=7$ B. $n=9$ C. $n=8$ D. None
6	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	A. 120 B. 1512 C. 1250 D. 15120
7	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. $2n$
8	If n is any positive integer then $n! > n^2$ for	
9	The expansion $(1 + x)^{-3}$ holds when	A. $ x > 1$ B. $ x < 1$ C. $x < 1$ D. $x > 1$
10	Question Image	
11	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
12	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
13	For each natural number n , $n(n+1)$ is	A. an even B. an odd C. multiple of 3 D. Irrational
14	If $ x < 1$, then the first two terms of $(1 - x)^{1/2}$ are	
15	The third term in the expansion of $(1+2x)$ is	A. $-2x^2$ B. $-4x^2$ C. $2x^2$ D. $4x^2$
16	The middle term of the expansion $(1 + 2x)^6$ is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
17	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8

18	The sum of the coefficient in the expansion of $(a + x)^5$ is	<p>A. 32 B. 16 C. 8 D. 5</p>
19	1st four terms of the expansion $(1-x)^2$ are	<p>A. $1 + 2x + 3x^2 + 4x^3$ B. $3x^2 + 2x + 1$ C. $1 + 3x + 4x^2 + 5x^3$ D. None of these</p>
20	There is no integer n for which 3^n is	<p>A. Odd B. even C. Natural D. Prime</p>