Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	The period of tan x/7 is	A. 3π B. 7π C. 15π D. 5π
2	For all positive integral value of n,3^n< n! , when	A. n> 6 B. n< 6 C. n<11 D. n>11
3	The fifteenth term of $(3-a)^{15}$ is	A. -17a¹² B. -945a¹³ C. -941a¹³ D. -515a¹²
4	The coefficient of x^{18} in $(ax^4-bx)^9$ after expansion is	A. 84a³ b⁶ B. 22a³b⁶ C. 27a⁴b⁵ D. 28a³b⁶
5	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
6	The 5th term of $(3a-2b)^{-1}$ is	A. 77b²/a⁵ B. 16b²/243 a⁵ C. 17b⁴/43a⁵ D. 25b³/43a⁵
7	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
8	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
9	The 7th term of $(3^8 + 6^4x)^{11/4}$ is	A. -19217/3 x⁶ B. 189/2 6⁴x C. 2227/12 x³ D. -19712/3 x⁶
10	The 8th term of $(1+2x)^{-1/2}$is	A. -221/16 x⁷ B. -225/18 x⁷ C. -407/9 x³ D. -429/16 x⁷
11	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
12	The coefficient of the third term of $(8a-b)^{1/3}$, after simplification is	A. -228 B. 1/288 C. 1/220 D. -1/177
13	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
14	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
		A. 295

15	(x3-1/x)12	B. 495 C. 395 D. 722
16	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
17	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
18	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
19	$(x^3-1/2x)^6$ is	A. 15/16 x² B. 2/13 x² C. 17/7 x² D. 16/15 x²
20	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421
21	n^2 - 1 divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational D. Prime Number
22	n! > 2^n-1 is true when	A. n≤ 3 B. n≤ 6 C. n≥ 4 D. n≤ 6
23	for n€ N, 3^{2n+7} is divisible by	A. 7 B. 8 C. 9 D. 10
24	If nis positive integers, then 2^n>2n+1, only when	A. n≤ 3 B. n≥ 3 C. n≤ 2 D. n≤ 1
25	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
26	For n€ N,$2^{n>2}$ > n is to only when	A. n<2 B. n≤ 4 C. n≥ 4
27	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
28	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8
29	If n is any positive integer ,t hen 2+4+6+.....+2 n=	A. 2ⁿ-1 B. 2ⁿ+1 C. n²+1 D. n(n+1)
30	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10