ECAT Mathematics Chapter 10 Mathematical Inductions

Sr	Questions	Answers Choice
1	The positive integer just greater than $(1+0.0001)^{10000}$ is	A. 4 B. 5 C. 2 D. 3
2	The sum of co-efficient in $(1+x-3x^2)^{4163}$ is	A. 0 B. 1 C. -1 D. None
3	$(51)^4$ is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
4	The 7th term of $(3^8 + 6^4 x)^{11/4}$ is	A. -19217/3 x^6 B. 189/2 6^4x C. 2227/12 x^3 D. -19712/3 x^6
5	$n^2 - 1$ divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational D. Prime Number
6	$^nC_2$ = exists when n is _____	
7	The coefficient of x^n in the expansion of $(1-2x)^{-1}$ is	A. $(-1)^n 2^n$ B. 2^n C. $(-1)^{(n+1)} x^r$ D. $(n+1)2^n$
8	The proposition S(n) for any n∈ N is only true if k∈ 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
9	The middle term of $(x-y)^8$ is	A. 25 $x^4 y^4$ B. 70 $x^4 y^4$ C. 120 $x^4 y^4$ D. 97$x^4 y^4$
10	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
11	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
12	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
13	Question Image	A. $^{10}C_6$ B. $^{10}C_5$ C. $^{10}C_4$ D. None
14	The coefficient of x^{18} in $(ax^4-bx)^9$ after expansion is	A. 84$a^3 b^6$ B. 22$a^3 b^6$ C. 27$a^4 b^5$ D. 28$a^3 b^6$
15	The seventh term of $(x^3+1/x)^8$ is	A. 71 B. -22 C. 27 D. 28

16	If n is any positive integer then $n^2 > n + 3$ for	
17	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. $1 - x + x^2$
18	The fifth term of $(a+2x3)17$ is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
19	The 5th term of $(3a-2b)^{-1}$ is	A. $77b^2/a^5$ B. $16b^2/243 a^5$ C. $17b^4/43a^5$ D. $25b^3/43a^5$
20	Question Image	A. Even B. Odd C. Prime D. None of these