NTS Educators ESE (Science) Jobs Test

Sr	Questions	Answers Choice
1	In the figure angle A is =	A. 15 B. 60 C. 90 D. 20
2	Sin-1 [-1/2] = _____.	A. ∏/3 B. -∏/6 C. -∏/3 D. ∏/6
3	In 30,60,90 triangle if the smallest side is 6 than the side opposite to the angle of 60^o is	A. 12 B. 3 C. 6√3 D. 6
4	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both A and B
5	If y = sin(ax + b) then fourth derivative of y with respect to x=	A. a⁴ cos (ax + b) B. a⁴ sin (ax + b) C. -a⁴ sin(ax +b) D. a4 tan (ax + b)
6	A die is thrown what is the probability that there is a prime number on the top?	A. 1/2 B. 1/3 C. 1/6 D. 2/3
7	The number of diagonals of a six sided figure are	A. 9 B. 6 C. 12 D. 3
8	Every prime number is also	A. Rational number B. even number C. Irrational number D. multiple of two numbers
9	Period is Tan x/5 is	A. 5π B. 4π C. 2π D. π/5
10	The sum of the series 1+5+9+13+17+21+25+29 is:	A. 10 cm B. 20 cm C. 30 cm D. 40 cm
11	If $y = (ax)^m + b^m$, then dy/dx equals	A. m (ax) ^m x^{m-1} B. ma^m x^{m-1} C. m a^m x^{m-1} D. m a^m x^{m-2}
12	The set (Z, +) forms a group	A. Function on B B. Range C. Domain D. A into B
13	The common difference of the sequence 7,4,1.....is	A. 1 B. -3 C. 5 D. 0
14	A point of a solution region where two of its boundary lines intersect is called	A. Boundary B. Inequality C. Half plane D. Vertex

15	The fifth term of the sequence $a_n = 3n - 2$ is	A. 3 B. -3 C. 13 D. -13
16	If Cosα = 3/5, Cosβ = 5/13, then	A. Cos(α +β) =33/65 B. Sin(α +β) =56/65 C. sin²(α +β/2) =1/65 D. Cos(α +β) =63/65
17	A fraction in which the degree of the numerator is less than the degree of the denominator is called	A. 1-i √-3 / 2 B. -1+i √-3 / 2i C. -1+i √3 / 2 D. 1+i √3 / 2
18	x-1/(x+2)(x-2) =	A. 4/3(x-4) -1/3(x-1) B. 3/4(x+2) + 1/4(x-2) C. 2/3(x-2) - 4/3(x+2) D. 3/x - 2/x+1
19	The vertices of the ellipse $x^2 + 4y^2 = 16$ are	A. (±,4,0) B. (0,±,4) C. (± 2,0) D. (0,± 2)
20	The set { {a,b} } is	A. {X/X∈ A∧x ∈ U} B. {X/X∉ A∧x ∈ U} C. {X/X∈ A and x ∉ U} D. A-U