NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	A relation in which the equality is true only for some values of the unknown variable is called	A. An identity B. An equation C. A polynomial D. Inverse function
2	Cot 360° =_____.	A. Undefined B. 0.707 C. -0.5 D. 0
3	The cube roots of unity ω = ----------	A. 1-i √-3 / 2 B. -1+i √-3 / 2i C. -1+i √3 / 2 D. 1+i √3 / 2
4	The degree of the polynomial $2x^4 + 3x^2 + 16x + 28 = x^4 + 2x^2$ is	A. [a_{ij -}b_{ji}] B. [a_{ij -}b_{ij}] C. [a_{ij -}b_{ij}] D. [a_{ij] - [}b_{ij}]
5	Given eight points in a plane no three of which are collinear how many lines do the points determine?	A. 16 B. 64 C. 28 D. 36
6	Sec^{-1} x=	A. Cos⁻¹ 1/x B. Cosec⁻¹ 1/x C. Cos-1 (-x) D. Tan⁻¹ x
7	The principal value of sin^{-1} [√3/2] is	A. π/3 B. -π/3 C. 2π/3 D. 5π/3
8	A point of a solution region where two of its boundary lines intersect is called	A. Boundary B. Inequality C. Half plane D. Vertex
9	Sin^{-1} (-x) =?	A. Sin⁻¹ x B. -Sin⁻¹ x C. Cos⁻¹ x D. -Cos⁻¹ x
10	If $x^2 + y^2 = 4$, Then dy/dx =	A. 2x +2y B. 4 -x² C. -x/y D. y/x
11	In the figure angle A is =	A. 15 B. 60 C. 90 D. 20
12	The axis of the parabola $y^2 = 4ax$ is	A. x =0 B. Y =0 C. X = y D. X = -y
13	If i,m,n are the direction cosines of a vector $\overline{OP}$ then	A. l² + m² + n² =0 B. l² - m² + n² =1 C. l² + m² + n² =1 D. l² + m² - n² =0

14	If the sum of the roots of $(a + 1)x^2 + (2a + 3)x + (3a + 4) = 0$ is -1, then product of the roots is	A. Commutative law w.r.t multiplication B. Associative law w.r.t addition C. Distributive law w.r.t addition D. Multiplication of a scalar with the matrix
15	If the diagonal of a square has coordinates (1,2) and(5,6) the length of a side is	A. 3 B. 4 C. 1 D. 5
16	The number of diagonals of a six sided figure are	A. 9 B. 6 C. 12 D. 3
17	The set of the first elements of the ordered pairs forming a relation is called its	A. -x B. does not exist C. 1/x D. 0
18	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
19	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
20	If a cone is cut by a plane perpendicular to the axis of the cone then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse