NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	Sin-1 (√2/2)=?	A. π/2 B. π/3 C. 3π/4 D. 2π
2	Two natural numbers whose sum is 25 and difference is 5, are	A. 25, 20 B. 20, 10 C. 20, 5 D. 15, 10
3	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
4	Ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
5	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
6	The number of ways in which 5 distinct toys can be distributed among 3 children is	A. 3⁵ B. 5³ C. C⁵₃ D. P⁵₃
7	The parametric equation of a curve are $x = t^2$, $y = t^2$ then	A. dy/dx =3t/2 B. dy/dx =t⁵ C. dy/dx =5t⁴ D. None
8	Which is a proper rational fraction	A. 3x - 7/x² +4 B. 2x² - 5/x² + 4 C. 3x⁴/2x² - 15 D. All are proper rational fraction
9	There are 30 Red, 20 Green and some Blue bells in a bag if the probability of finding a Red ball is 1/3,how many are red balls in the bag	A. 120 B. 20 C. 40 D. 90
10	If $k_1 : k_2 = 1:1$ then the point P dividing the line is	A. Mid point B. Extreme left point C. Extreme Right point D. Plies out side k₁ and k₂
11	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
12	The gradient of the line joining (1,4) and (-2,5) is	A. 3/8 B. -2 2/3 C. -1/3 D. 2
13	The value of the polynomial $3x^3 + 4x^2 - 5x + 4$ at x = -1 is	A. A² + B² B. A² + B²+ 2AB C. A + B D. A² + B² + AB+BA
14	π/3 is	A. A positive integer B. A negative integer C. A natural number D. An irrational number

15	The line joining (1,3) to (a,b) has unit gradient then	A. a-b =-2 B. a+b = 0 C. A-b =5 D. 2a + 3b =1
16	In the function v = 4/3 π r^3, V is a function of	A. 3/4 B. r C. v D. π
17	An angle of one radian is equivalent to	A. 90^o B. 60^o C. 67^o D. 57^o, 18^o
18	x is a member of the set {-1,0,3,5} y is a member of the set {-2,1,2,4} which is possible?	A. x- y =-6 B. x -y < -6 C. x -y > 6 D. None
19	d/dx [cos x^2] =_____	A. -2x cos x² B. -2x² sin x² C. x² sin x D. -2x² sin x²
20	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