

NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	If $f(x) = x^3 - 2x^2 + 4x - 1$, then $f(-2) = ?$	A. 0 B. -25 C. 5 D. 45
2	Which is not included in the domain of $\text{Cos}^{-1} x$	A. 0 B. 1 C. -1 D. 2
3	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
4	For any set X, $X \cup X$ is	A. 15 B. 15i C. -15i D. -15
5	Which of the following is solution of $\text{Tan}^2 x = 1/3$	A. $7\pi/6$ B. $5\pi/6$ C. $\pi/6$ D. All
6	The direction cosines of y-axis are	A. 1,0,0 B. 0,1,0 C. 0,0,1 D. 1,1,1
7	What is the period of $\text{Cot } x$?	A. 2π B. π C. $\pi/2$ D. 4π
8	$1+2+3+\dots+n=?$	A. $n(n+1)/2$ B. $n+1/2$ C. $n(n+1)(2n+1)/6$ D. n^3
9	An angle θ is such that $\tan \theta = 1$ and $\cos \theta$ is negative then	A. $\sin \theta$ is positive B. $\cos \theta = \sqrt{2}/4$ C. $\cos \theta = -1$ D. $\sec \theta$ is negative
10	The angle a ($0^\circ < a < 180^\circ$) measured counterclockwise from positive x-axis to a non-horizontal straight line l is called the	A. Rotation B. Inclination C. Radian D. None
11	$d/dx (3y^4) =$	A. $12y^3 dy/dx$ B. $8y^3$ C. $8y^3 dy/dx$ D. $12y^3$
12	$\sqrt{23}$ is	A. A rational number B. An irrational number C. An even integer D. A factor of 36
13	The curves $y = x^2$, $y = x$ intersect at	A. (0,0), (1,1) B. (2,4) C. (0,),(2,4) D. (0,3),(-1,1)
14	$d/dx a^x$ is	A. a^{x-1} B. a^x C. x in a D. $a^x \ln a$
15	If $4 - x > 5$, then	A. $x > 1$ B. $x > -1$ C. $x < 1$ D. $x < -1$

16	A point of a solution region where two of its boundary lines intersect is called	A. Boundary B. Inequality C. Half plane D. Vertex
17	If $\cos\theta = 0$, Then $\theta =$	A. $n\pi/2$ B. $(2n + 1)\pi/2$ C. $(2n - 1)\pi/2$ D. $(n \pm 1)\pi/2$
18	If $ A \neq 0$ then A is called	A. 1 B. -1 C. ± 1 D. 0
19	Sum of integers starting from to n is	A. $n(n+1)/4$ B. $n(n+1)/6$ C. $n(n+1)/2$ D. $n(n-1)/2$
20	Find the geometric mean between 4 and 16	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1