

NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	Find the geometric mean between 4 and 16	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
2	The fifth term of the sequence $a_n = 3n - 2$ is	A. 3 B. -3 C. 13 D. -13
3	If p and r are integers $P = 0$, and $p \neq -r$, which of the following must be true?	A. $p \< r$ B. $p \> r$ C. $p + r \< 0$ D. $p - r \< -0$
4	The value of x, and y, when $(x+iy)^2=5+4i$	A. $X=2, y=-1$ B. $X=-2, y=1$ C. $X=2, y=-i$ D. $X=2, y=2$
5	$\text{Sin}^{-1}(\sqrt{2}/2)=?$	A. $\pi/2$ B. $\pi/3$ C. $3\pi/4$ D. 2π
6	If $\theta = 60^\circ$ then	A. $\sin \theta = 1/2$ B. $\tan \theta = \cot 30^\circ$ C. $\theta = \pi/4$ D. $\sec \theta = 4$
7	Which of the following is the equation of a line with slope 0 and passing through the point (4,3)	A. $X=4$ B. $X = -4$ C. $Y = 3$ D. $Y = -6$
8	$\omega^{88} = ?$	A. A and B are multiplicative inverse of each other B. A and B are additive inverses of each other C. A and B are singular matrices D. A and B are equal
9	If the vector $2i+4j-2k$ and $2i +6j+xk$ are perpendicular then x=7	A. 4 B. 8 C. 14 D. 7
10	Area of $\Delta ABC =$	A. $ab \sin \alpha$ B. $1/2 ab \sin \alpha$ C. $1/2 ac \sin \gamma$ D. $1/2 ac \sin \beta$
11	If the order of A is n x m. Then order of kA is	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
12	The range of inequality $x + 2 > 4$ is	A. (-1,2) B. (-2,2) C. (1, ∞) D. None
13	The associative angle of 280° is	A. 100° B. 10° C. 80° D. -80°
14	Which is not included in the domain of $\text{Cos}^{-1} x$	A. 0 B. 1 C. -1 D. 2
15	The equation of two polynomials $P(x)/Q(x)$ where $Q(x) \neq 0$ with no common factor is called	A. 12 B. 1 C. 10 D. 1

16	Domain of $\operatorname{Cosec}\theta$ is	<p>A. is \mathbb{R} but $\theta \neq n\pi$</p> <p>B. is \mathbb{R} but $\theta \neq n\pi$</p> <p>C. is \mathbb{R} but $\theta \neq 2n\pi$</p> <p>D. is \mathbb{R} but $\theta \neq n\pi/2$</p>
17	$\sin^{-1}(-x) = ?$	<p>A. $\sin^{-1}x$</p> <p>B. $-\sin^{-1}x$</p> <p>C. $\cos^{-1}x$</p> <p>D. $-\cos^{-1}x$</p>
18	If $\sin^{-1}x + \cos^{-1}y = \pi$, then x and y are	<p>A. Associative angles</p> <p>B. Complementary angles</p> <p>C. Reflex angles</p> <p>D. Supplementary angles</p>
19	If $f_1(x)$ and $f_2(x)$ are any two anti derivatives of a function $F(x)$ then the value of $f_1(x) - f_2(x)$ is	<p>A. A variable</p> <p>B. A constant</p> <p>C. Undefined</p> <p>D. Infinity</p>
20	If $-1 < x < 0$, which of the following statement must be true?	<p>A. $x < x^2 < x^3$</p> <p>B. $x < x^3 < x^2$</p> <p>C. $x^2 < x < x^3$</p> <p>D. $x^2 < x^3 < x$</p>