

NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	If $f(x) = \sqrt{x^2 - 4}$ then which is not included in the domain of $f(x)$	A. 0 B. -2 C. 1 D. 4
2	Sum of integers starting from to n is	A. $n(n+1)/4$ B. $n(n+1)/6$ C. $n(n+1)/2$ D. $n(n-1)/2$
3	The direction cosines of y-axis are	A. 1,0,0 B. 0,1,0 C. 0,0,1 D. 1,1,1
4	The set $(Z, +)$ forms a group	A. Function on B B. Range C. Domain D. A into B
5	If a and b are any two distinct negative real numbers and G-ab where A.G.H represent arithmetic geometric and harmonic means then	A. 1 B. $\omega^{2\sqrt{2}}$ C. ω D. 0
6	$(x+2)^2 = x^2 + 4x + 4$ is	A. 1 B. 2 C. 3 D. 4
7	The value of the polynomial $3x^3 + 4x^2 - 5x + 4$ at $x = -1$ is	A. $A^2 + B^2$ B. $A^2 + B^2 + 2AB$ C. $A + B$ D. $A^2 + B^2 + AB + BA$
8	$\sin^{-1} \sqrt{3}/2 = ?$	A. $2\pi/3$ B. $\pi/2$ C. $\pi/3$ D. $\pi/5$
9	Which of the following is the solution of $\cot^2 x = 1/\sqrt{3}$	A. $\pi/5$ B. $\pi/3$ C. $\pi/7$ D. $\pi/9$
10	$\sin^{-1}(-x) = ?$	A. $\sin^{-1} x$ B. $-\sin^{-1} x$ C. $\cos^{-1} x$ D. $-\cos^{-1} x$
11	The two different parts of the hyperbola are called is	A. Vertices B. Directrices C. Nappes D. Branches
12	Which is a proper rational fraction	A. $3x - 7/x^2 + 4$ B. $2x^2 - 5/x^2 + 4$ C. $3x^4/2x^2 - 15$ D. All are proper rational fraction
13	$8 > t$ then	A. $(s-t)^2 > (t-8)^2$ B. $(s-t)^2 < (t-8)^2$ C. $(s-t)^2 = (t-8)^2$ D. None
		A. $-2x \cos x$ B. $-2x^2 \sin$

14	$d/dx [\cos x^2] =$ _____	$x^2 \sin x$ C. $x^2 \sin x$ D. $-2x^2 \sin x$
15	Find the geometric mean between 4 and 16	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
16	$d/dx (3y^4) =$	A. $12y^3 dy/dx$ B. $8y^3$ C. $8y^3 dy/dx$ D. $12y^3$
17	Which of the following is the subset of all sets ?	A. $A \neq C$ B. $B = C$ C. $A = B$ D. $A \neq B$
18	Which is an explicit function	A. $y = x^2 + 2x - 1$ B. $x^2 + xy + y^2 = 2$ C. $xy^2 - y + 9/xy = 1$ D. All are
19	If any two rows (or any two columns) of a square matrix are inter changed, the determinant of the resultant matrix is	A. True B. False C. Fallacious D. Some times true
20	The multiplicative inverse of x such that $x = 0$ is	A. -x B. does not exist C. $1/x$ D. 0