

## NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	120° degrees are equal to how many radians?	A. $\pi/3$ radians B. $2\pi/3$ radians C. $\pi/4$ radians D. $\pi/2$ radians
2	If $f_1(x)$ and $f_2(x)$ are any two anti derivatives of a function $F(x)$ then the value of $f_1(x) - f_2(x)$ =	A. A variable B. A constant C. Undefined D. Infinity
3	If $\cos\theta = 0$ , Then $\theta =$	A. $n\pi/2$ B. $(2n + 1)\pi/2$ C. $(2n - 1)\pi/2$ D. $(n \pm 1)\pi/2$
4	There are 30 Red balls and 25 Green balls in a bag of a ball is drawn from the bag randomly what is the probability that a Blue ball comes out?	A. 1 B. 0.5 C. 0 D. None
5	The set of complex numbers forms a group under the binary operation of	A. 0 B. $\pm 1$ C. 1 D. $\{0,1\}$
6	Area of $\Delta ABC =$	A. $ab \sin\alpha$ B. $1/2 ab \sin\alpha$ C. $1/2 ac \sin\gamma$ D. $1/2 ac \sin\beta$
7	$\cot 360^\circ =$ _____.	A. Undefined B. 0.707 C. -0.5 D. 0
8	The direction cosines of y-axis are	A. 1,0,0 B. 0,1,0 C. 0,0,1 D. 1,1,1
9	The fifth term of the sequence $a_n = 3n - 2$ is	A. 3 B. -3 C. 13 D. -13
10	If $C^r_r, P^r_r = 24:1$ then $r = ?$	A. 1 B. 2 C. 3 D. 4
11	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
12	A sequence of numbers whose reciprocals forms an arithmetic sequence is called	A. Harmonic series B. Arithmetic series C. Harmonic sequence D. Geometric sequence
13	The difference of two consecutive terms of an A.P is called	A. Zero B. One C. Four D. Infinite
14	The sum of the interior angles for a 16 sided polygon is	A. 0 B. $\omega$ C. 1 D. $1/\omega$
15	If you looking a high point from the ground then the angle formed is	A. Angle of elevation B. Angle of depression C. Right angle D. Horizon

16	If $\sin \theta = \cos \theta$ then $\theta =$	A. $30^\circ$ B. $45^\circ$ C. $60^\circ$ D. $90^\circ$
17	If the vector $2i+4j-2k$ and $2i+6j+xk$ are perpendicular then $x=$	A. 4 B. 8 C. 14 D. 7
18	The cube roots of unity $\omega =$ -----	A. $1-i\sqrt{3}/2$ B. $-1+i\sqrt{3}/2i$ C. $-1+i\sqrt{3}/2$ D. $1+i\sqrt{3}/2$
19	An angle of one radian is equivalent to	A. $90^\circ$ B. $60^\circ$ C. $67^\circ$ D. $57^\circ, 18'$
20	The value of $\cos(\frac{1}{2} \cos^{-1} \frac{1}{2})$ is equal to	A. $\sqrt{3}/2$ B. $-3/4$ C. $1/16$ D. $1/4$