

## NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	If $\cos\theta = 0$ , Then $\theta =$	A. $n\pi/2$ B. $(2n + 1)\pi/2$ C. $(2n - 1)\pi/2$ D. $(n \pm 1)\pi/2$
2	Period of $\tan x/5$ is	A. $5\pi$ B. $4\pi$ C. $2\pi$ D. $\pi/5$
3	An angle of one radian is equivalent to	A. $90^\circ$ B. $60^\circ$ C. $67^\circ$ D. $57^\circ, 18^\circ$
4	If a line passes through origin then the equation of the line is	A. $y = m/x$ B. $y = mx$ C. $x = my$ D. None
5	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. $1/4$
6	The sum of the interior angles for a 16 sided polygon is	A. 0 B. $\omega$ C. 1 D. $1/\omega$
7	The difference of two consecutive terms of an A.P is called	A. Zero B. One C. Four D. Infinite
8	If the vector $2i+4j-2k$ and $2i+6j+xk$ are perpendicular then $x=$	A. 4 B. 8 C. 14 D. 7
9	$\int \frac{1}{ax+b} dx =$	A. $\frac{1}{a} \log  ax+b  + c$ B. $\log  ax+b  + c$ C. $\frac{1}{b} \log  ax+b  + c$ D. $\frac{1}{x} \log  ax+b  + c$
10	For which of the following ordered pairs (s,t) is $s+t >$ and $s-t < -3$ ?	A. (3,2) B. (2,3) C. (1,8) D. (0,3)
11	If P(E) is the probability that an event will occur then $P(\bar{E}) =$	A. 1 B. 0.5 C. 2 D. 0
12	If $ A  \neq 0$ then A is called	A. 1 B. -1 C. $\pm 1$ D. 0
13	The common difference of the sequence 7,4,1.....is	A. 1 B. -3 C. 5 D. 0
14	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. $X=2, y=2$
15	0 (zero) is	A. An irrational number B. A rational number C. A negative integer D. A positive integer

		D. A positive number
16	An angle $\theta$ 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
17	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
18	The axis of the parabola $y^2 = 4ax$ is	A. $x=0$ B. $Y=0$ C. $X=y$ D. $X=-y$
19	The point $(-5,3)$ is the center of a circle and $P(7,-2)$ lies on the circle the radius of the circle is	A. 2 B. 13 C. 7 D. 8
20	How many elements are in the sample space of two rolling dies	A. 6 B. 12 C. 18 D. 36