

## NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	$Ab > 0$ and $a > 0$ then	A. $a > b$ B. $a < b$ C. $a = b$ D. None
2	$8 > t$ then	A. $(s - t)^2 > (t - 8)^2$ B. $(s - t)^2 < (t - 8)^2$ C. $(s - t)^2 = (t - 8)^2$ D. None
3	If $\alpha$ and $\beta$ be irrational roots of a quadratic equation, then	A. $\alpha = b/a$ and $\beta = ca$ B. $\alpha = a/b$ and $\beta = -c/a$ C. $\alpha^2 + \beta^2 = 1$ D. $\alpha = -b/a$ and $\beta = c/a$
4	Which is not a half plane	A. $ax + by < c$ B. $ax + by > c$ C. Both A and B D. None
5	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
6	$\int \frac{1}{ax + b} dx =$	A. $\frac{1}{a} \log  ax + b  + c$ B. $\log  ax + b  + c$ C. $\frac{1}{b} \log  ax + b  + c$ D. $\frac{1}{x} \log  ax + b  + c$
7	Which of the following is the subset of all sets ?	A. $A \neq C$ B. $B = C$ C. $A = B$ D. $A \neq B$
8	An angle of one radian is equivalent to	A. $90^\circ$ B. $60^\circ$ C. $67^\circ$ D. $57^\circ, 18^\circ$
9	The mid point of the line joining $(-1, -3)$ to $(3, -5)$ is	A. $(1, 1)$ B. $(1, -1)$ C. $(2, -8)$ D. $(1, -4)$
10	Corola available in 5 models 8 colours and 3 sizes how many Corola must a local dealer have no hand in order to have one of each kind avialable?	A. 24 B. 120 C. 16 D. 39
11	If $\theta = 60^\circ$ then	A. $\sin \theta = 1/2$ B. $\tan \theta = \cot 30^\circ$ C. $\theta = \pi/4$ D. $\sec \theta = 4$
12	Multiplicative inverse of "1" is	A. 4 B. 3 C. 2 D. 1
13	$\csc \pi/3$	A. 2 B. 1 C. 0 D. $2/\sqrt{3}$
14	$F(x) = xx$ decreases in the interval	A. $(0, e)$ B. $(0, 1)$ C. $(-\infty, 0)$ D. None

15	The statement that a group can have more than one identity elements is	<p>A. True</p> <p>B. False</p> <p>C. Fallacious</p> <p>D. Some times true</p>
16	One of the roots of the equation $2x^2 + 3x + n = 0$ is the reciprocal of the other, then $n =$ -----	<p>A. Both A,B have the same number of columns</p> <p>B. Both A,B do not have the same order</p> <p>C. Number of col A is same as number of rows of B</p> <p>D. Number of rows of A is same as number of col of B</p>
17	The end points of the major axis of the ellipse are called its	<p>A. foci</p> <p>B. Vertices</p> <p>C. Co-vertices</p> <p>D. eccentricity</p>
18	If $f(x) = \sqrt{x^2 - 4}$ then which is not included in the domain of $f(x)$	<p>A. 0</p> <p>B. -2</p> <p>C. 1</p> <p>D. 4</p>
19	If $a$ and $b$ are any two distinct negative real numbers and $G = \frac{ab}{a+b}$ where $A, G, H$ represent arithmetic geometric and harmonic means then	<p>A. 1</p> <p>B. <math>\omega^{&gt;2}</math></p> <p>C. <math>\omega</math></p> <p>D. 0</p>
20	If $Z_1 = \sqrt{-36}$ , $Z_2 = \sqrt{-25}$ , $Z_3 = \sqrt{-16}$ , then what is the sum of $Z_1$ , $Z_2$ and $Z_3$ ?	<p>A. <math>\sqrt{3} i</math></p> <p>B. <math>\sqrt{7}</math></p> <p>C. <math>-2-1</math></p> <p>D. <math>\sqrt{5}</math></p>