

NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	The average of first 100 integers is=	A. 50 1/2 B. 25 1/4 C. 100 D. 5050
2	Period is Tan x/5 is	A. 5π B. 4π C. 2π D. π/5
3	If a cone is cut by a plane perpendicular to the axis of the cone then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse
4	Find the geometric mean between 4 and 16	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
5	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. e = 0
6	If 0 is not an integral multiple of π/2 then Cot ⁴ θ + Cot ² θ = ?	A. Cosec ⁴ θ - Cosec ² θ B. Tan ² θ - Tan ² θ C. Cosec ² θ + Cosec ² θ D. Sin θ Cos θ
7	If C ⁿ _r , P ⁿ _r = 24:1 then r = ?	A. 1 B. 2 C. 3 D. 4
8	Cos 315° =	A. 0.707 B. 0.5 C. 1 D. 0
9	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
10	If i, m, n are the direction cosines of a vector \vec{OP} then	A. i ² + m ² + n ² = 0 B. i ² - m ² + n ² = 1 C. i ² + m ² + n ² = 1 D. i ² + m ² - n ² = 0
11	The set of all positive even integers is	A. Φ B. {1, 2, 3} C. {Φ} D. {0}
12	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
13	If Sin ⁻¹ x + cos ⁻¹ y = π, then x and y are	A. Associative angles B. Complementary angles C. Reflex angles D. Supplementary angles

14	In the triangle ΔABC , where C is the right angle $\tan A + \tan B =$	<p>A. $A + B$ B. $C^2 \cdot AB$ C. A^2 / BC D. B^2 / AC</p>
15	If you looking a high point from the ground then the angle formed is	<p>A. Angle of elevation B. Angle of depression C. Right angle D. Horizon</p>
16	Corola available in 5 models 8 colours and 3 sizes how many Corola must a local dealer have on hand in order to have one of each kind available?	<p>A. 24 B. 120 C. 16 D. 39</p>
17	If $-1 < x < 0$, which of the following statement must be true?	<p>A. $x < x^2$ B. $x < x^3$ C. $x^2 < x^3$ D. $x^2 < x^3$</p>
18	Complex roots of real quadratic equation occur in	<p>A. Nilpotent matrix B. Singular matrix C. Non singular matrix D. Diagonal matrix</p>
19	0 (zero) is	<p>A. An irrational number B. A rational number C. A negative integer D. A positive number</p>
20	In general matrices do not satisfy	<p>A. Not a group B. A group w.r.t. subtraction C. A group w.r.t. division D. A group w.r.t. multiplication</p>