

ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	$f(x) = x$ is	A. trigonometric function B. exponential function C. quadratic function D. identity function
2	If the radius of a circle is increased by 1 then area of circle will be	A. πr^2 B. $\pi(r+1)^2$ C. $\pi r^2 + 1$ D. $2\pi(r+1)$
3	If $a=5j + 2j$, $b=2i - 3j$, then $ a+2b =$	A. $\sqrt{21}$ B. $\sqrt{97}$ C. $\sqrt{39}$ D. None of these
4	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola
5	The value of the expression $3 \cos \theta + 4 \sin \theta$ lie between	A. -7 and 7 B. -25 and 25 C. -1 and 1 D. -5 and 5
6	The line $Ax + By + C = 0$ will touch the circle $x^2 + y^2 = \lambda$ when	A. $C^2 \leq (A^2 + B^2)\lambda$ B. $A^2 \leq (C^2 + B^2)\lambda$ C. $B^2 \leq (A^2 + C^2)\lambda$ D. None of these
7	Question Image	
8	Question Image	
9	Question Image	A. $a = a$ B. $a < a$ C. $a > a$ D. $a \geq a$
10	If two balls are drawn from a bag containing 3 white, 4 black and 5 red balls. Then the probability that the drawn balls are of different colours is	A. $\frac{1}{66}$ B. $\frac{3}{66}$ C. $\frac{19}{66}$ D. $\frac{47}{66}$
11	A square matrix $A = [a_{ij}]$ is upper triangular when	A. $c_{ij} = 0$ B. $b_{ij} = 0$ C. $a_{ij} = 0$ for all $i > j$ D. $d_{ij} = 0$
12	Question Image	
13	Question Image	A. $a-b=ab$ B. $ab=a$ C. $a+b=ab$
14	Question Image	A. 3 B. 1

14	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$ then $p^2 + q^2 + r^2 + 2pqr$ is equal to	☒ A. 1 ☐ C. 2 ☐ D. -1
15	Question Image	
16	The 5th and 13th terms of an A.P are 5 and -3 respectively The first term of the A.P is	☐ A. 1 ☐ B. -15 ☒ C. 9 ☐ D. 2
17	Power set of difference set N-W is	☐ A. Empty set ☐ B. Infinite set ☒ C. Singleton set ☐ D. $\{0, \emptyset\}$
18	Question Image	☐ A. I ☐ B. A ☒ C. $A !$ ☐ D. None of these
19	If $z = (x, y)$ then z has no multiplicative inverse when	☐ A. $x \neq 0, y = 0$ ☒ B. $x = 0, y = 0$ ☐ C. $x = 0, y \neq 0$ ☐ D. None of these
20	Question Image	☒ A. The law of sines ☐ B. The law of cosines ☐ C. The law of tangents ☐ D. None of these