

## ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	$\cos^4\theta$ - $\sin^4\theta$ =	A. cos4 <span style='color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; textalign: center; background-color: rgb(255, 255, 224);'><i>&gt;0</i>&gt; B. cos2<span style='color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; textalign: center; background-color: rgb(255, 255, 224);'><i>&gt;0</i>&gt; Csin<span style='color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; textalign: center; background-color: rgb(255, 255, 224);'><i>&gt;0</i>&gt; Csin<span style='color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; textalign: center; background-color: rgb(25, 255, 255, 224);'><i>&gt;0</i>&gt; Csin&lt;-&gt;0 Sin2&lt;-&gt;0 Sin2&lt;-&gt;0</span></span></span></span>
2	No term of a geometric sequence can be	A. 0 B. 1 C. 2 D. 3
3	Question Image	A. An expression B. Rational fraction C. Equation D. Identity
4	A function of the form $p(x)/Q(x)$ is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
5	Question Image	
6	Roots of the equation $x^2$ - 7x + 10 = 0 are	A. {2, 5} B. {-2, 5} C. {2,5} D. {-2,-5}
7	The key for opening a door is in a bunch of 10 keys. A man attempts to open the door by trying the keys at random discarding the wrong key. The probability that the door is opened in the 5th trial is	A. 1 / 10 B. 2 / 10 C. 3 / 10 D. 4 / 10
8	Two circles x2 +y2 +8x -9= 0 and x2+y2+6y +k =0 touchinternallyif the value of k is	A. k = 9 B. k = ±9 C. k=-9 D. k=11
9	The are of the circle centred at ( 1 , 2) and passing through ( 4 , 6) is:	A. 10π B. 25π C. 5π D. 25/2π
10	$\cot \theta = \sin 2 \frac{\theta}{i}  \theta $	
11	The behavior of trigonometric function is called	A. Continuity B. Discontinuity C. Periodicity D. Smoothness
12	Question Image	A. A positive integer B. A negative integer C. A natural number D. An irrational number
	e	

13	Question Image	
14	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
15	If a > 0 they parabola y2 =-4ax lies in	A. I and iv quadrant B. I quadrant C. II and III quadrant D. All are incorrect
16	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
17	The total cost of 2 apples and 3 oranges is \$1.70, which of the following is true	A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined
18	A polynomial of arbitrary degree	A. $f(x) = 0$ B. $f(x) = x$ C. $f(x) = a$ D. $f(x) = ax + b, a \ne 0$
19	sin h x =	
20	The set of all points in the plane that are equally distant from a fixed point to called a	A. Parabola B. ellipse C. Hyperbola D. Circle