

ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	If $a_1 = a_2 = 2$, $a_n = a_{n-1} - 1$ ($n > 2$), then a_5 is	A. 1 B. 0 C. -1 D. -2
2	Question Image	
3	By expressing $\cos 113^\circ$ in terms of trigonometrical ratios, answer will be	A. $\cos 76^\circ = -0.7093$ B. $\cos 65^\circ = -0.4258$ C. $\cos 67^\circ = -0.3907$ D. $\cos 62^\circ = -0.8520$
4	Every natural number is	A. A prime number B. An irrational number C. An integer D. An even number
5	Question Image	
6	$45^\circ =$ _____	
7	A circle is a limiting case of an ellipse whose eccentricity	A. Tends to a B. Tends to b C. Tends to 0 D. Tends to $a + b$
8	Question Image	
9	The roots of the equation will be irrational if $b^2 - 4ac$ is	A. Positive and perfect square B. Positive but not a perfect square C. Negative D. Zero
10	For any integer k, $w^n =$ _____ when $n = 3k$	A. 1 B. 2 C. 0 D. -4
11	If five triangles are constructed having sides of the lengths indicated below, the triangle that will NOT be a right triangle is	A. 8, 15, 17 B. 3, 4, 5 C. 12, 15, 18 D. 5, 12, 13
12	The fifth term of an A.P. Whose first term is 5 and common difference is 3, is	A. 20 B. 17 C. 25 D. 30
13	In school there are 150 students Out of these 80 students enrolled for mathematics class 50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time Find the number of students who have taken both physics and mathematics.	A. 40 B. 30 C. 50 D. 20
14	Question Image	A. 0 B. 1 C. 8 D. $\text{color: rgb(34, 34, 34); font-family: \"Times New Roman\"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);}$
15	The set $(Q, .)$	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
16	Question Image	

17	If a particle moves according to the law $s = t^3 - t^2$, then its velocity at time $t = 1.5$ is	A. $9/2$ B. $15/4$ C. 5 D. None
18	Question Image	A. 0 B. 1 C. 2 D. none of these
19	Question Image	A. $-2x \cos x^{2/2}$ B. $-2x^{2/2} \sin x^{2/2}$ C. $-x^{2/2} \sin x$ D. $-2x^{2/2} \sin x^{2/2}$
20	If $f(x) = x $, then $(0,0)$ is the	A. Critical point B. Inflection point C. Stationary point D. None of these