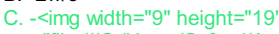


ECAT Mathematics MCQ's Test For Pre General Science

Sr	Questions	Answers Choice
1	The number of arbitrary constants in the general solution of a differential equation is equal to the different equation	A. Order B. Degree C. Variables D. All are correct
2	The principal value of $\sin^{-1}[\frac{\sqrt{3}}{2}]$ is	A. $\frac{5\pi}{3}$ B. $-\frac{2\pi}{3}$ C.  $\frac{\pi}{3}$ D. $\frac{\pi}{3}$
3	$ax + by < c$ is linear inequality in	A. four variables B. three variables C. two variables D. one variable
4	Question Image <input type="text"/>	A. $2x$ B. $\frac{x}{2}$ C. $2x^3$ D. $\frac{x^3}{2}$
5	$\int \sec^2(ax + b) dx$ is equal to:	A. $\tan^2(ax + b)$ B. $\frac{1}{a} \tan^2(ax + b)$ C. $\frac{1}{a} \tan(ax + b)$ D. $\tan(ax + b)$
6	The longer side of a parallelogram is 10 cm and the shorter is 6 cm. If the longer diagonal makes an angles 30° with the longer side, the length of the longer diagonal is	
7	If $f(x) = -x^2$ then $f(-2)$ is	A. -2 B. 2 C. -4 D. 4
8	The set $\{1, -1, i, -i\}$ form a group under	A. Addition B. Multiplication C. Subtraction D. None
9	How many types of an equation	A. 1 B. 3 C. 2 D. None
10	$x^3 + 2x^2 - 3x + 5$ is _____	A. An equation B. A polynomial C. Proper rational fractions D. Improper rational fractions
11	A tower subtends an angle α at a point on the same level as the root of the tower and at a second point, b meters above the first, the angle of depression of the foot of the tower is β . The height of the tower is	A. $b \cot \alpha \tan \beta$ B. $b \tan \alpha \tan \beta$ C. $b \tan \alpha \cot \beta$ D. None of these
12	If $x^3 + ax^2 - a^2x - a^3$ is divided by $x + a$, then the remainder is	A. 0 B. a^3 C. $2a^3$ D. $-2a^3$
13	If $f(x) = x^2 - x$ then $f(1)$ is	A. 0 B. 1 C. 2 D. 3
14	The additive inverse of a matrix A is	D. None of these

15	Question Image	
16	If the domain of sequence is finite set then the sequence is called	<p>A. geometric sequence B. infinite sequence C. finite sequence D. arithmetic sequence</p>
17	AB is a vertical pole and C is its middle point. The end A is on the level ground and P is any point on the level ground other than A. the portion CB subtends an angle β at P. If AP : AB = 2 : 1 then $\beta =$	
18	The value of 150° in term of π is	<p>A. $2\pi/5$ B. $5\pi/2$ C. $3\pi/2$ D. $2550/32401\pi$</p>
19	Question Image	<p>A. 0 B. 1 C. 8 D. ><i></i></p>
20	Question Image	<p>A. A complex number B. A rational number C. A natural number D. An irrational number</p>