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 $\sin^{-1}[-\sqrt{(\sqrt{3})}/2]$ is	A. 5π/3 B. -2π/3 C. -<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025">π/3 <!--[endif]--><o:p></o:p> D. π/3
3	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
4	Question Image	A. 2x B. x/2 C. 2x³ D. x³/2
5	$\int Sec^2$ (ax + b) dx is equal to:	A. tan² (ax + b) B. 1/a tan² (ax + b) C. 1/atan (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 cotαtanβ B. b tanαtanβ C. b tanαcotβ 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. a³ C. 2a³ D. -2a³
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	A. geometric sequence B. infinite sequence C. finite sequence D. arithmetic sequence
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 and angle β at P. If AP : AB = 2 : 1 then β=	
18	The value of 150^{o} in term of π is	A. 2π/5 <!--[endif]--><o:p></o:p> B. 5π/2 C. 3π/2 D. 2550/32401π
19	Question Image	A. 0 B. 1 C. 8 D. ∞
20	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number