ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	If $f(x) = x^2$ then $f(-2)$ is	A. -2 B. 2 C. 4 D. -4
2	Question Image	
3	If $f(x) = x^2$ then $f(0)$ is	A. 0 B. 1 C. 2 D. none of these
4	If $f(x) = x^2$ then $f(0)$ is	A. 0 B. 1 C. 2 D. none of these
5	Question Image	A. $f(x) = x^2$ B. $f(x^2) = x$ C. $f(x) = x$ D. none of these
6	If y is an image of x under the function f, then we write	A. $y = f(x)$ B. $x = f(y)$ C. $y = x$ D. none of these
7	There are _____ basic techniques for solving a quadratic equation	A. Two B. Three C. Four D. None of these
8	Question Image	A. image B. pre-image C. constant D. none of these
9	$(2 + w)(2 + w^2) =$ _____	A. 1 B. 2 C. 3 D. 0
10	Question Image	A. images B. pre-images C. constants D. none of these
11	$w^{28} + w^{38} =$ _____	A. 0 B. 1 C. w D. -1
12	$w^{73} =$ _____	A. 0 B. 1 C. w D. w^2
13	$w^{29} =$ _____	A. 0 B. 1 C. w D. w^2
14	For any integer k, $w^n =$ _____ when $n = 3k$	A. 1 B. 2 C. 0 D. -4
15	Question Image	A. range of f B. domain of f C. both (a) and (b) D. none of these
16	The product of cube roots of unity is	A. Zero B. 1 C. -1

17	If $b^2 - 4ac = 0$ then the roots of the equation are	A. Real and distinct B. Real and equal C. Imaginary D. None of these
18	Question Image	A. $x = f(y)$ B. $y = f(x)$ C. $x = f(x)$ D. $y = f(y)$
19	If $b^2 - 4ac$ is positive then the roots of the equation are	A. Real B. Imaginary C. Positive D. Negative
20	A function from X to X is denoted as	B. $f : X$ to Y D. $f : Y$ to Y
21	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
22	The roots of the equations will be equal if $b^2 - 4ac$ is	A. Positive B. Negative C. 1 D. Zero
23	A function from X to Y is written as	B. $f : X$ to Y D. $f : Y$ to Y
24	If w is a cube root of unity then $1 + w + w^2 = $ _____	A. 1 B. 2 C. 0 D. -1
25	If the roots of $3x^2 + kx + 12 = 0$ are equal then $k = $ _____	
26	A rule or correspondence that assigns to each element x in X a unique element y in Y is called a function from	A. X to X B. X to Y C. Y to X D. none of these
27	A rule that assigns to each elements x in X a unique element y in Y is called a _____	A. domain B. range C. function D. none of these
28	The discriminant of the quadratic equation $ax^2 + bx + c = 0$ is	A. $b^2 + 4ac$ B. $b^2 - 4ac$ C. $4ac - b^2$ D. $a^2 - 4ac$
29	If one root of the equation $x^2 - 3x + a = 0$ is 2 then $a = $ _____	A. 0 B. 1 C. 2 D. 3
30	Roots of the equation $9x^2 - 12x + 4 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these