

ECAT (Pre-Eng) Mathematics Chapter 6 Quadratic Equations

Sr	Questions	Answers Choice
1	The solution of the quadratic equation $x^2 - 7x + 10 = 0$, is	A. 2 B. 5 C. 2, 5 D. 7
2	Question Image	
3	$4^{1+x} + 4^{1-x} = 10$ is called	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
4	The product of cube roots of unity is	A. Zero B. 1 C. -1 D. None of these
5	The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is	A. $a \neq 0$ B. $a \neq 0$ C. $a \neq 0$ D. $a \neq 0, b \neq 0$
6	If α, β are the roots of $ax^2 + bx + c = 0$ and $\alpha + h, \beta + h$ are the roots of $px^2 + qx + r = 0$, then $h =$	
7	Question Image	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
8	If $x^4 - 10x^2 - 2x + 4$ is divided by $x + 3$, then the remainder is	A. 1 B. 0 C. 4 D. None of these
9	A polynomial $P(x)$ has a factor $(x-a)$ if $P(a) =$	A. a B. x C. 1 D. 0
10	The value of p for which both the roots of the equation $4x^2 - 20x + (25p^2 + 15p - 66) = 0$ are less than 2, lies in	
11	If the roots of $3x^2 + kx + 12 = 0$ are equal then $k =$ _____	
12	Question Image	A. 1 B. 2 C. 0 D. 4
13	The roots of the equation $ax^2 + bx + c = 0$ are complex/imaginary if	A. $b^2 - 4ac < 0$ B. $b^2 - 4ac = 0$ C. $b^2 - 4ac > 0$ D. None of these
14	In a quadratic equation with leading co-efficient 1, a student reads the co-ordinates of the roots as -15 and -4. The correct roots are	A. 6, 10 B. -6, -10 C. 8, 8 D. -8, -8
15	If the roots of $ax^2 + b = 0$ are real and distinct then	A. $ab > 0$ B. $a = 0$ C. $ab < 0$ D. $a > 0, b > 0$
16	If the roots of $ax^2 - bx - c = 0$ change by the same quantity, then the expression in a, b, c that does not change is	
17	Find a if 1 is a root of the equation $x^2 + ax + 2 = 0$	A. 3 B. -3 C. 2 D. 0
		A. {2, 5}

18	Roots of the equation $x^2 - 7x + 10 = 0$ are	B. $\{-2, 5\}$ C. $\{2, 5\}$ D. $\{-2, -5\}$
19	Only one of the root of $ax^2 + bx + c = 0$, $a \neq 0$ is zero if	A. $c = 0$ B. $c = 0, b \neq 0$ C. $b = 0, c = 0$ D. $b = 0, c \neq 0$
20	If the equation $x^2 + 2x - 3 = 0$ and $x^2 + 3x - k = 0$ have a common root then the non - zero value of k is	A. 1 B. 3 C. 2 D. 4