

ECAT Mathematics Chapter 6 Quadratic Equations

Sr	Questions	Answers Choice
1	$w^{28} + w^{38} = \underline{\hspace{2cm}}$	A. 0 B. 1 C. w D. -1
2	The solution of equation $x^2 + 2 = 0$ in the set of real number is	A. Infinite set B. Singleton set C. Null set D. None of these
3	The standard parabolic form of the equation $f(x) = x^2 + 4x + 1$ is	A. $x(x+4)+1$ B. $(x+2)^2 - 3$ C. $(x+4)^3 + 9$ D. $x(x-2)^2 + 1$
4	The quadratic equation $8 \sec^2 \theta - 6 \sec \theta + 1 = 0$ has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
5	$w^{15} = \underline{\hspace{2cm}}$	A. 0 B. 1 C. w D. w^2
6	If α, β are the roots of the equation $x^2 - 8x + p = 0$ and $\alpha^2 + \beta^2 = 40$, then value of p is	A. 8 B. 12 C. 10 D. 14
7	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
8	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. $-2a^3$
9	The minimum value of the quadratic function $f(x) = 5x^2 - 11$, is	A. -11 B. 6 C. -7 D. 7
10	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 0 B. 1 C. 2 D. None of these
11	If one root of $5x^2 + 13x + k = 0$ be the reciprocal of the other root the value of k is	A. 0 B. 2 C. 1 D. 5
12	If the roots of $x^2 + ax + b = 0$ are non-real, then for all real x, $x^2 + ax + b$ is	A. Negative B. Positive C. Zero D. Nothing can be said
13	If the roots of $ax^2 + bx + c = 0$ ($a > 0$) be greater than unity, then	A. $a + b + c = 0$ B. $a + b + c \geq 0$ C. $a + b + c \leq 0$ D. None of these
14	The value of x for which the polynomials $x^2 - 1$ and $x^2 - 2x + 1$ vanish simultaneously is	A. 2 B. 1 C. -1 D. -2
15	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. Linear equation B. Quadratic equation C. Cubic equation D. None of these

16	If $x^4 - 10x^2 - 2x + 4$ is divided by $x + 3$, then the remainder is	<p>A. 1 B. 0 C. 4 D. None of these</p>
17	The graph of the quadratic equation is	<p>A. Straight line B. Circle C. Parabola D. ellipse</p>
18	The roots of the equation $ax^2 + bx + c = 0$ are complex/imaginary if	<p>A. $b^2 - 4ac < 0$ B. $b^2 - 4ac = 0$ C. $b^2 - 4ac > 0$ D. None of these</p>
19	Question Image <input type="text"/>	<p>A. $b = c$ B. $a = c$ C. $a = b$ D. $b = 0$</p>
20	Both the roots of the equation $(x - b)(x - c) + (x - c)(x - a) + (x - a)(x - b) = 0$ are always	<p>A. Positive B. Negative C. Real D. None of these</p>