


ECAT Mathematics Chapter 6 Quadratic Equations

Sr	Questions	Answers Choice
1	The two parts into which 57 should be divided so that their product is 782 are	A. 43, 14 B. 34, 23 C. 33, 24 D. 44, 13
2	If a polynomial $P(x)$ is divided by $x - a$, then the remainder is	A. $P(0)$ B. $P(-a)$ C. $P(a)$ D. None of these
3	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. $a^2 - 4ac$
4	The roots of $ax^2 + bx + c = 0$ are always unequal if	A. $b^2 - 4ac = 0$ B. $b^2 - 4ac \neq 0$ C. $b^2 - 4ac > 0$ D. $b^2 - 4ac \geq 0$
5	Question Image	
6	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 2 C. Quadratic equation D. None of these
7	$w^4 = \underline{\hspace{2cm}}$	A. 0 B. 1 C. w D. w^2
8	The roots of the equation $2^{2x} \cdot 10 \cdot 2^x + 16 = 0$ are	A. 2, 8 B. 1, 3 C. 1, 8 D. 2, 3
9	$(1+w)(1+w^2)(1+w^4)(1+w^8) \dots 50$ factors	A. 0 B. -1 C. 1 D. 2
10	Root of the equation $3^{x-1} + 3^{1-x} =$ is	A. 2 B. 1 C. 0 D. -1
11	Question Image	
12	If one root of the equation $ix^2 - 2(i+1)x + (2-i) = 0$ is $2-i$, then the other root is	A. $-i$ B. $2+i$ C. i D. $2-i$
13	If the roots of $ax^2 + b = 0$ are real and distinct then	A. $ab > 0$ B. $a = 0$ C. $ab < 0$ D. $a > 0, b > 0$
14	A polynomial $P(x)$ has a factor $(x-a)$ if $P(a) =$	A. a B. x C. 1 D. 0
15	In quadratic equation $f(x) = ax^2$, if $a > 0$, then the graph of parabola	A. Opens up B. Opens down C. close up D. symmetric w.r.t. x-axis
16	Question Image	A. $a^2 + c^2 = -ab$ B. $a^2 - c^2 = -ab$

- 17 If $x^2 + px + 1$ is a factor of $ax^3 + bx + c$, then
- ab
C. $a^2 - c^2 = ab$
D. None of these
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- 18 In a quadratic equation with leading co-efficient 1, a student reads the co-obtain the roots as - 15 and -4. The correct roots are
- A. 6, 10
B. -6, -10
C. 8, 8
D. -8, -8
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- 19 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
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- 20 
- A. c/a
B. $-c/a$
C. b/a
D. $-b/a$