# Mathematics ECAT Pre Engineering Chapter 6 Quadratic Equations Online Test

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | If the roots of $ax^2 + bx + c = 0$ are equal in magnitude but opposite in sign, then | A. a = 0<br>B. b = 0<br>C. c = 0<br>D. None of these |
| 2 | Question Image | A. b = c<br>B. a = c<br>C. a = c<br>D. b = 0 |
| 3 | The quadratic equation $8\sec^2\theta - 6\sec\theta + 1 = 0$ has | A. Infinitely many roots<br>B. Exactly two roots<br>C. Exactly four roots<br>D. No roots |
| 4 | If a > 0, b > 0, c > 0, then the roots of the equation $ax^2 + bx + c = 0$ are | A. Real and negative<br>B. Non-real with negative real parts<br>C. Real and positive<br>D. Nothing can be said |
| 5 | 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<br>B. 2 + i<br>C. i<br>D. 2 - i |
| 6 | If the roots of $ax^2 + b = 0$ are real and distinct then | A. ab > 0<br>B. a = 0<br>C. ab < 0<br>D. a > 0, b > 0 |
| 7 | If $ax^2 + bx + x = 0$ is satisfied by every value of x, then | A. b = 0, c = 0<br>B. c = 0<br>C. b = 0<br>D. a = b = c = 0 |
| 8 | Both the roots of the equation (x - b) (x - c) + (x - c)(x - a) + (x - a)(x - b) = 0 are always | A. Positive<br>B. Negative<br>C. Real<br>D. None of these |
| 9 | Question Image | |
| 10 | Question Image | |
| 11 | The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is | |
| 12 | Question Image | |
| 13 | Question Image | A. 4<br>B. 6<br>C. 8<br>D. 10 |
| 14 | Question Image | A. 2<br>B. 4<br>C. 8<br>D. 16 |
| 15 | Question Image | A. 0<br>B. 1<br>C. 2<br>D. 3 |
| 16 | The cube roots of 8 are | |
| 17 | Question Image | A. 1<br>B. -1<br>C. 5<br>D. 2 |
| 18 | Question Image | A. -1<br>B. 0<br>C. 2 |

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|---|---|---|
| | | D. 1 |
| 19 | Question Image | |
| 20 | Question Image | |
| 21 | Question Image | |
| 22 | Question Image | A. 0<br>B. 1<br>C. 2<br>D. None of these |
| 23 | Which of the following is a factor of $x^3 - 3x^2 + 2x - 6$ | A. x + 2<br>B. x + 3<br>C. x - 3<br>D. x - 4 |
| 24 | Find a if 1 is a root of the equation $x^2 + ax + 2 = 0$ | A. 3<br>B. -3<br>C. 2<br>D. 0 |
| 25 | If x - 2 is a factor of ax2- 12x + a = 2a, then a = _____ | A. -5<br>B. 5<br>C. 0<br>D. 1 |
| 26 | If $x^2 - 7x + a$ has remainder 1 when divided by x + 1, then a = _____ | A. -7<br>B. 7<br>C. 0<br>D. None of these |
| 27 | Two quadratic equation in which xy term is missing and the coefficients of $x^2$ and $y^2$ are equal, give a linear equation by _____ | A. Addition<br>B. Subtraction<br>C. Multiplication<br>D. Division |
| 28 | The polynomial x - a is a factor of the polynomial f(x) if and only if | A. f(a) is positive<br>B. f(a) is negative<br>C. f(a) = 0<br>D. None of these |
| 29 | The product of the four fourth roots of unity is | A. 0<br>B. 1<br>C. -1<br>D. None of these |
| 30 | Question Image | |