ECAT Mathematics Chapter 6 Quadratic Equations Online Test

Sr	Questions	Answers Choice
1	Another name of quadratic equation is	A. Polynomial B. 2nd degree polynomial C. Linear equation D. simaltaneous equations
2	A quadratic equation in x is an equation that can be witten in the form	A. ax²+ b = 0 B. ax³ +b²+c=0 C. ax² +bx+c=0 D. ax³ +bx³+cx=0
3	If a $(p + q)^2$+ bpq +c = 0 and a $(p + r)^2$+ 2 bpr + c = 0, then qr equals	A. p²+ c/a B. p²+ a/c C. p²+ c/a D. p²- c/a
4	If sin$\alpha$and cos$\alpha$are the roots of the equation px^2+ qx + r =0, then	A. p²- q²+ 2pr = 0 B. (p + r)²= q²- r² C. p²+ q²- 2pr = 0 D. (p - r)²= q²+ r²
5	Root of the equation 3^{x-1}+ 3^{1-x}= is	A. 2 B. 1 C. 0 D. -1
6	For the equation $\|x^2\|$ + |x| -6 =0, the roots are	A. One and only one real number B. Real with sum one C. Real with sum zero D. Real with product zero
7	Question Image	A. Lies between 4 and 7 B. Lies between 5 and 9 C. Has no value between 4 and 7 D. Has no value between 5 and 9
8	Question Image	
9	Question Image	A. 15 B. 9 C. 7 D. 8
10	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 > 0 C. a + b + c < 0 D. None of these
11	If$\alpha,\beta$are the roots of ax^2+ bx + c = 0 andα+ h,β+ h are the roots of px^2+ qx + r=0, then h =	
12	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	
13	Let the equation ax^2- bx + c = 0 have distinct real roots both lying in the open interval (0, 1) where a, b, c are given to be positive integers. Then the value of the ordered triplet (a, b, c) can be	A. (5, 3, 1) B. (4, 3, 2) C. (5, 5, 1) D. (6, 4, 1)
14	Question Image	A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
15	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

16	Question Image	A. (-1, 2) B. (-1, 1) C. (1, 2) D. {-1}
17	Question Image	A. 1 B. 2 C. 0 D. 4
18	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
19	The equation $(\cos p - 1)x^2 + x(\cos p) + \sin p = 0$ in the variable x, has real roots, then p can take any value in the interval	A. (0, 2π) B. (-π, -0) C. (0,π) D. None of these
20	If $2x^{1/3} + 2x^{-1/3} = 5$, then x is equal to	A. 1 or -1 B. 2 or 1/2 C. 8 or 1/8 D. 4 or 1/4
21	Question Image	A. Rational B. Irrational C. Non-real D. Zero
22	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
23	The value of k (k > 0) for which the equation $x^2 + kx + 64 = 0$ and $x^2 - 8x + k = 0$ both will have real roots is	A. 8 B. -16 C. -64 D. 16
24	The set of real roots of the equation $\log_{(5x+4)}(2x+3)^3 - \log_{(2x+3)}(10x^2 + 23x + 12) = 1$ is	A. {-1} B. {-3/5} C. Empty set D. {-1/3}
25	Question Image	A. (a - c)²= b²- c² B. (a - c)²= b²+ c² C. (a + c)²= b²- c² D. (a + c)²= b²+ c²
26	If $x^2 + px + 1$ is a factor of $ax^3 + bx + c$, then	A. a²+ c²= -ab B. a²- c²= - ab C. a²- c²= ab D. None of these
27	Question Image	A. n if n is even B. 0 for any natural number n C. 1 if in odd D. None of these
28	The roots of the equation $2^{2x} - 10.2^x + 16 = 0$ are	A. 2, 8 B. 1, 3 C. 1, 8 D. 2, 3
29	Question Image	

30	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