CHAPTER-4 | QUADRATIC EQUATIONS

QUIZ PART-03

1. A quadratic equation has how many roots?
   A. 1
   B. 2
   C. 3
   D. 4 (B)

Explanation : A quadratic equation has two roots.

2. The roots of $100x^2 - 20x + 1 = 0$ are:
   A. 1/20
   B. 1/10
   C. 1/10
   D. None (C)

Explanation : Roots are 1/10.

3. The value of k for $4x^2 - 2x + k - 4 = 0$ where one root is reciprocal of the other is:
   A. -8
   B. 8
   C. -4
   D. 4 (D)

Explanation : k = 4.

4. The sum of the roots of $ax^2 + bx + c = 0$ is:
   A. -b/a
   B. b/a
   C. c/a
   D. c/a (A)

Explanation : Sum of roots is -b/a.

5. The product of the roots of $ax^2 + bx + c = 0$ is:
   A. b/a
   B. a/c
   C. a/b
   D. c/a (B)

Explanation : Product of roots is c/a.

6. The equation $3x^2 + 2x - 1 = 0$ has roots:
   A. Rational
   B. Irrational
   C. Real
   D. Imaginary (A)

Explanation : The roots are real and rational.

7. The quadratic equation $2x^2 - 5x + 3 = 0$ can be solved by:
   A. Factorization
   B. Completing the square
   C. Both A and B
   D. None (C)

Explanation : Both methods work.

8. The roots of $x^2 - 6x + 8 = 0$ are:
   A. 4 and 2
   B. 2 and 4
   C. -4 and -2
   D. -2 and -4 (A)

Explanation : Roots are 4 and 2.

9. The roots of $x^2 - 7x + 12 = 0$ are:
   A. 3 and 4
   B. 4 and 3
   C. -3 and -4
   D. -4 and -3 (A)

Explanation : Roots are 3 and 4.

10. A quadratic equation has real roots if its discriminant is:
    A. Positive
    B. Zero
    C. Negative
    D. Both A and B (D)

Explanation : Discriminant positive or zero gives real roots.