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(Affiliated to CBSE up to +2 Level)

CLASS: X **SUB.: MATHS (NCERT BASED)** **DATE: 30-07-2020**

Chapter 4:- Quadratic Equations

According to new CBSE Exam Pattern,

MCQ Questions for Class 10 Maths Carries 10 Marks.

1. Every quadratic polynomial can have at most
(a) three zeros (b) one zero (c) two zeros (d) none of these

2. If $x^2 + 5px + 16$ has no real roots, then
(a) $p > \frac{8}{5}$ (b) $\frac{-8}{5} < p < \frac{8}{5}$ (c) $p < \frac{-8}{5}$ (d) none of these

3. For $ax^2 + bx + c = 0$, which of the following statement is wrong?
(a) If $b^2 - 4ac$ is a perfect square, the roots are rational.
(b) If $b^2 = 4ac$, the roots are real and equal.
(c) If $b^2 - 4ac$ is negative, no real roots exist.
(d) If $b^2 = 4ac$, the roots are real and unequal.

4. The roots of the equation $9x^2 - bx + 81 = 0$ will be equal, if the value of b is
(a) ± 9 (b) ± 18 (c) ± 27 (d) ± 54

5. The value of p for equation $2x^2 - 4x + p = 0$ to have real roots will be
(a) $p \le -2$ (b) $p \ge 2$ (c) $p \le 2$ (d) $p \ge -2$

6. If $p = 1$ and $q = -2$ are roots of equation $x^2 - px + q = 0$, then quadratic equation will be
(a) $x^2 + 2x - 1 = 0$ (b) $x^2 - x - 2 = 0$ (c) $x^2 - 2x + 1 = 0$ (d) $x^2 + x + 2 = 0$

7. Roots of quadratic equation $x^2 - 3x = 0$, will be
(a) 3 (b) 0, –3 (c) 0, 3 (d) none of these

8. Value of D when root of $ax^2 + bx + c = 0$ are real and unequal will be
(a) $D \ge 0$ (b) $D > 0$ (c) $D < 0$ (d) $D = 0$

9. Positive value of p for which equation $x^2 + px + 64 = 0$ and $x^2 - 8x + p = 0$ will both have real roots will be
(a) $p \ge 16$ (b) $p \le 16$ (c) $p = 1$ (d) none of these

10. If the equation $x^2 - kx + 1$, have no real roots, then
(a) $-2 < k < 2$ (b) $-3 < k < 3$ (c) $k > 2$ (d) $k < -2$

V.S.A. Type Questions for Class 10 Maths Carries 10 Marks.

1. Find the value of k for which the quadratic equation $kx^2 - 5x + k = 0$ have real roots.
(2 Marks)

2. If – 4 is a root of the quadratic equation $x^2 + px - 4 = 0$ and $x^2 + px + k = 0$ has equal roots, find the value of k.
(2 Marks)

3. For what value of k, does the given equation have real and equal roots?
$(k + 1)x^2 - 2(k - 1)x + 1 = 0$.
(2 Marks)

4. Using quadratic formula, solve the following quadratic equation for x:
$x^2 - 2ax + (a^2 - b^2) = 0$
(2 Marks)

5. For what value of k are the roots of the quadratic equation $3x^2 + 2kx + 27 = 0$ real and equal?
(2 Marks)