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(Affiliated to CBSE up to +2 Level)

CLASS: X

SUB.: MATHS (NCERT BASED)

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Chapter 4:- Quadratic Equations

According to new CBSE Exam Pattern,

MCQ Questions for Class 10 Maths Carries 20 Marks.

1. Which of the following is not a quadratic equation

(a) $x^2 + 3x - 5 = 0$

(b) $x^2 + x^3 + 2 = 0$

(c) $3 + x + x^2 = 0$

(d) $x^2 - 9 = 0$

2. The quadratic equation has degree

(a) 0

(b) 1

(c) 2

(d) 3

3. The cubic equation has degree

(a) 1

(b) 2

(c) 3

(d) 4

4. A bi-quadratic equation has degree

(a) 1

(b) 2

(c) 3

(d) 4

5. The polynomial equation $x(x + 1) + 8 = (x + 2)(x - 2)$ is

(a) linear equation

(b) quadratic equation

(c) cubic equation

(d) bi-quadratic equation

6. The equation $(x - 2)^2 + 1 = 2x - 3$ is a

(a) linear equation

(b) quadratic equation

(c) cubic equation

(d) bi-quadratic equation

7. The roots of the quadratic equation $6x^2 - x - 2 = 0$ are

(a) $\frac{2}{3}, \frac{1}{2}$

(b) $-\frac{2}{3}, \frac{1}{2}$

(c) $\frac{2}{3}, -\frac{1}{2}$

(d) $-\frac{2}{3}, -\frac{1}{2}$

8. The quadratic equation whose roots are 1 and

(a) $2x^2 + x - 1 = 0$

(b) $2x^2 - x - 1 = 0$

(c) $2x^2 + x + 1 = 0$

(d) $2x^2 - x + 1 = 0$

9. The quadratic equation whose one rational root is $3 + \sqrt{2}$ is

(a) $x^2 - 7x + 5 = 0$

(b) $x^2 + 7x + 6 = 0$

(c) $x^2 - 7x + 6 = 0$

(d) $x^2 - 6x + 7 = 0$

10. The equation $2x^2 + kx + 3 = 0$ has two equal roots, then the value of k is

(a) $\pm\sqrt{6}$

(b) ± 4

(c) $\pm 3\sqrt{2}$

(d) $\pm 2\sqrt{6}$

11. The roots of the quadratic equation $x + \frac{1}{x} = 3$, $x \neq 0$ are.

(a) $3 + \sqrt{5}, 3 - \sqrt{5}$

(b) $2 + \sqrt{5}, 2 - \sqrt{5}$

(c) $\frac{3 + \sqrt{5}}{2}, \frac{3 - \sqrt{5}}{2}$

(d) $\frac{3 + \sqrt{3}}{2}, \frac{3 - \sqrt{3}}{2}$

12. The roots of the quadratic equation $2x^2 - 2\sqrt{2}x + 1 = 0$ are

(a) $\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$

(b) $\sqrt{2}, \sqrt{2}$

(c) $\frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}}$

(d) $\sqrt{2}, \frac{1}{\sqrt{2}}$

13. The sum of the roots of the quadratic equation $3x^2 - 9x + 5 = 0$ is

(a) 3

(b) 6

(c) -3

(d) 2

14. If the roots of $ax^2 + bx + c = 0$ are in the ratio $m : n$, then

(a) $mna^2 = (m + n) c^2$

(b) $mnb^2 = (m + n) ac$

(c) $mnb^2 = (m + n)^2 ac$

(d) $mnb^2 = (m - n)^2 ac$

15. If one root of the equation $x^2 + px + 12 = 0$ is 4, while the equation $x^2 + px + q = 0$ has equal roots, the value of q is

(a) $\frac{49}{4}$

(b) $\frac{4}{49}$

(c) 4

(d) 49