

4. Quadratic Equations

4 Marks:

- 1) Page No-88 \rightarrow Exercise -4.2
2, 3, 4, 5, 6 problems
- 2) page No-92 \rightarrow Example-9
- 3) page No-94 \rightarrow Exercise -4.3
1, 2, 3, 4, 5 problems

2 Marks:

- 1) page No-80 \rightarrow Example-2
- 2) page No-82 \rightarrow Exercise-4.1 (1st roman)
- 3) Find the roots of the following equations
i) $2x^2 - 5x + 3 = 0$ ii) $3x^2 - 2\sqrt{6}x + 2 = 0$ v) $2x^2 + x - 6 = 0$ vii) $2x^2 - x + \frac{1}{8} = 0$
ii) $6x^2 - x - 2 = 0$ iv) $x^2 - 3x - 10 = 0$ vi) $100x^2 - 20x + 1 = 0$ viii) $x^2 + 5x + 6 = 0$
ix) $\sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$
- 4) page No-94 \rightarrow Exercise -4.3

- 5) ^{1st roman} Verify that 1 and $\frac{3}{2}$ are the roots of the equation $2x^2 - 5x + 3 = 0$
1 Mark:

- 1) Find the roots of following equations
i) $x^2 - 7x + 12 = 0$ ii) $x^2 - 2x + 1 = 0$ iii) $x^2 + 7x + 12 = 0$ iv) $x^2 + x - 6 = 0$
v) $x^2 + 7x + 1 = 0$ vi) $7x^2 + x - 1 = 0$ vii) $x^2 + x - 110 = 0$
- 2) If $b^2 - 4ac = 0$ (or) discriminant is zero then the roots are _____
- 3) If $b^2 - 4ac > 0$ (or) discriminant greater than zero then the roots are _____
- 4) If $b^2 - 4ac < 0$ (or) discriminant less than zero then the roots are _____
- 5) Is $x + \frac{1}{x} = 2$ quadratic equation?
- 6) What is the general form of quadratic equation?

- 7) Every quadratic equation has at least one real root (T/F)
- 8) The degree of quadratic equation is —
- 9) The equation $x^2 + \frac{1}{x^2} = 2$ is a quadratic equation (T/F)
- 10) If $x = \frac{1}{x}$, then roots are —
- 11) If $9x = \frac{4}{x}$, then roots are —
- 12) Find the discriminant of $4x^2 + 4x - 1 = 0$
- 13) If one root of the equation $x^2 - 4x + k = 0$ is 6, then the value of k is —
- 14) Discriminant of Q.E. $ax^2 + bx + c$ is '0' then the roots are — []
A) real B) equal C) A & B D) All the above
- 15) If -5 is a root of the quadratic equation $2x^2 + px - 15 = 0$, then $p =$ —