

# CHAPTER – 4

## QUADRATIC EQUATION

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### 4.1 INTRODUCTION

If  $P(x)$  is quadratic expression in variable  $x$ , then  $P(x) = 0$  is known as a quadratic equation.

#### (a) General form of a Quadratic Equation:

The general form of quadratic equation is  $ax^2 + bx + c = 0$ , where  $a, b, c$  are real numbers and  $a \neq 0$ . Since  $a \neq 0$ , quadratic equations, in general are of the following types :-

- (i)  $b = 0, c \neq 0$  i.e., of the type  $ax^2 + c = 0$ .
- (ii)  $b \neq 0, c = 0$ , i.e. of the type  $ax^2 + bx = 0$ .
- (iii)  $b = 0, c = 0$ , i.e. of the type  $ax^2 = 0$ .
- (iv)  $b \neq 0, c \neq 0$ , i.e., of the type  $ax^2 + bx + c = 0$ .