

## Mathematics

### CC - 4 (Common Core Course - 4): Theory - “Algebra”

#### Block - I : Groups and Subgroups

Unit - 1 : Sets , Relations and Functions

Unit - 2 : Groups and Examples

Unit - 3 : Subgroups

#### Block - II : Quotient Groups

Unit - 4 : Cosets and Lagrange’s Theorem for Finite Groups

Unit - 5 : Normal Subgroups and Quotient Groups

Unit - 6 : Homomorphisms and Cyclic Groups

#### Block - III : Rings - I

Unit - 7 : Rings - Definition and Examples

Unit - 8 : Integral Domains and Fields

Unit - 9 : Subrings and Ideals

#### Block - IV : Rings - II

Unit - 10 : Quotient Rings

Unit - 11 : Homomorphisms

Unit - 12 : Polynomial Rings

### Core Course - IV: Practical - “Algebra”

#### Block - I : Groups and Quotient Groups

Unit - 1 : Groups and Subgroups

Unit - 2 : Cosets And Lagrange’s Theorem for Finite Groups

Unit - 3 : Normal Subgroups and Quotient Groups

Unit - 4 : Homomorphisms and Cyclic Groups

#### Block - II : Rings

Unit - 5 : Rings , Integral Domains and Fields

Unit - 6 : Sub rings and Ideals

Unit - 7 : Quotient Rings and Homomorphisms

Unit - 8 : Polynomial Rings