

FYUGP (Revised)
Semester-IV (IDC)
Basic Algebra

(40 Marks)

1. **Introduction to Algebra**
 - What is algebra?
 - Use of symbols (variables like x , y , etc.).
 - Importance of algebra in everyday life.
2. **Basic Algebraic Operations**
 - Addition, subtraction, multiplication, and division and factorization of algebraic expressions.
 - Simple linear equations (one variable for solving simple essay type problems with one unknown).
 - System of linear equations (two variables for solving essay type problems with two unknowns).
3. **Word Problems and Logical Reasoning**
 - Translating real-world problems into algebraic expressions / equations.
 - Solving age problems, number puzzles.
4. **Algebra in Banking & Finance**
 - Simple and compound interest.
 - EMI calculations.
 - Personal savings and investment calculations.
5. **Computer Algebra**
 - Representation of numbers with different bases.
 - Arithmetic operations on real numbers with different bases.
 - Conversion of numbers to the same numbers with different bases.