Most Important Topics – Chapters 1 to 5

Chapter 1 – Computer System Organization

- Basic Components of a Computer System
- Input Unit
- Central Processing Unit (CPU)
- ALU, CU and Registers
- Memory Unit
- Output Unit
- Primary Memory
- Secondary Memory
- System Software
- Application Software
- Utility Software
- Programming Tools

Chapter 2 – Data Representation and Boolean Logic

- Number Systems
- Decimal Number System
- Binary Number System
- Octal Number System
- Hexadecimal Number System
- Decimal to Binary, Octal and Hexadecimal Conversion
- Binary, Octal and Hexadecimal to Decimal Conversion
- Conversion from One Base to Another Base
- ASCII
- ISCII
- Unicode
- Boolean Logic
- Boolean Operators – AND, OR, NOT
- Truth Tables
- Logic Circuits
- De Morgan's Laws

Chapter 3 – Getting Started with Python

- Problem-Solving
- Steps for Problem-Solving

- Problem Analysis
- Algorithm
- Need for an Algorithm
- Flowcharts
- Pseudocode
- Decomposition
- Python Programming Language
- Features of Python
- Advantages of Python
- Limitations of Python
- Installing Python
- Python Shell
- Command Line Interaction
- Python Editor / Script Mode

Chapter 4 – Python Programming Fundamentals

- Python Character Set
- Tokens
- Concept of an Object
- Variables and Data Types
- `int` , `float` , `complex` , `bool` , `str`
- `type()` Function
- Multiple Assignment
- Rules for Variable Names
- Mutable and Immutable Data Types
- Python Keywords
- Expressions
- Type Conversion
- Arithmetic Operators
- Relational Operators
- Logical Operators
- Assignment / Augmented Assignment Operators
- Membership Operators
- Identity Operators
- User Input
- User-defined Functions
- Indentation
- Comments
- Rules and Conventions for Python Programs
- Debugging
- Syntax Errors

- Run-time Errors
- Logical Errors

Chapter 5 – Conditional and Looping Constructs

- Types of Statements
- Program Control and Flow
- Indentation
- `if` Statement
- `if-else` Statement
- `if-elif-else` Statement
- Nested `if-elif-else`
- `for` Loop
- `while` Loop
- `range()` Function
- Nested Loops
- `break` Statement
- `continue` Statement
- `pass` Statement
- Practical Programs using Conditional Statements and Loops
- Even/Odd Number
- Positive/Negative/Zero
- Greatest of Numbers
- Factorial
- Prime Number
- Armstrong Number
- Palindrome Number
- Fibonacci Series
- Sum of Natural Numbers
- Multiplication Table