C LANGUAGE – SYLLABUS

1. **Introduction:**

    - Introduction to C
    - Environment Setup
    - Basic I/O

2. **Variables:**

    - Creating & Declaring a Variables(Syntax)
    - Naming a Variable
    - Change Variable Values
    - Add Variables Together

3. **Data Types:**

    - Data types in C
    - Format Specifiers

4. **Constants & Literals:**

    - Syntax for Constant & Literals

5. **Storage Classes:**

    - Types of Storage Classes
        - Automatic
        - External
        - Static
        - Register

6. **Type Casting:**

    - Implicit type Casting
    - Explicit type Casting

7. **Operators:**

    - Arithmetic Operator
    - Relational Operator
    - Equality Operator
    - Assignment Operator

- ➢ Logical Operator
- ➢ Shorthand Operator
- ➢ Conditional Operator
- ➢ Comment Line Operator

8. Conditional Branching Control Statements:

- ➢ If-Else
- ➢ Switch-Case

9. Conditional Looping Control Statements:

- ➢ While
- ➢ Do-While
- ➢ For

10. Unconditional Control Statements:

- ➢ Break
- ➢ Continue
- ➢ Goto

11. Arrays:

- ➢ Array Declaration(Syntax)
- ➢ Array Initialization
- ➢ Multi-Dimensional Array
- ➢ Character Array
- ➢ Initializing Character Array

12. Strings:

- ➢ Access String
- ➢ String Functions
  - • String Length
  - • Copying String
  - • Concatenating String
  - • Comparing String
  - • Reversing a String
  - • Ascending a String

13. Pointers:

- Pointer Expression
- Arrays with Pointers
- Pointer with Functions

14. Call by value & reference

15. Compound Data Types:

- Struct
- Union
- Enum
- Typedef

16. Pre-processor Directive:

17. I/O Functions:

- C Functions
- FunctionDeclaration

18. File I/O:

- Opening a File
- Closing a File
- Reading a File

19. Multiple file Compilation

20. Header Files

21. Dynamic Memory Management

22. Error Handling

23. GNU GCC Compiler:

- Environment Setup

24. Creating Libraries & Files

25. Project