C Programming DELIVERY- Asif Nafees (Shape My Skills)
PROGRAM FOR: BCA Ist
Minimum Hours Per Day: 1-2 hours

Module I (10 Days)

1. **Day 1:** Overview of C Programming (History of C, Basic Structure of a C Program)
2. **Day 2:** Constants, Variables & Data Types (Keywords & Identifiers, Data types in C)
3. **Day 3:** Constants (Variable names, Data types continued)
4. **Day 4:** Arithmetic Operators & Expressions
5. **Day 5:** Relational & Logical Operators
6. **Day 6:** Increment, Decrement, and Bitwise Operators
7. **Day 7:** Assignment, Conditional, and Special Operators
8. **Day 8:** Operator Precedence & Associativity
9. **Day 9:** Control Statements (if statement, if…else statement)
10. **Day 10:** Nested if…else, Else …if ladder, switch statement

Module II (10 Days)

1. **Day 1:** Loop Statements (do-while statement)
2. **Day 2:** Loop Statements (while loop)
3. **Day 3:** Loop Statements (for loop, break/continue)
4. **Day 4:** Arrays (Declaration & initialization, types of arrays)
5. **Day 5:** Arrays (one-dimensional and multidimensional arrays)
6. **Day 6:** Arrays (compile-time and runtime arrays)
7. **Day 7:** Arrays (limitations of arrays)
8. **Day 8:** Arrays (operations: insertion, deletion)
9. **Day 9:** Arrays (traversing and searching in arrays)
10. **Day 10:** Strings (Declaration, initialization, operations)

Module III (10 Days)

1. **Day 1:** Pointers (basics, pointer declaration)
2. **Day 2:** Pointers (accessing variable through pointers)
3. **Day 3:** Pointer Arithmetic
4. **Day 4:** Pointers to Arrays & Strings
5. **Day 5:** Double Pointers
6. **Day 6:** Memory Allocation (static vs dynamic memory allocation)
7. **Day 7:** Dynamic memory allocation (malloc, calloc)
8. **Day 8:** Dynamic memory allocation (realloc, free)
9. **Day 9:** Functions (Why functions, types of functions)
10. **Day 10:** Functions (return types, call by value/reference)

Module IV(10 Days)

1. **Day 1:** Storage Classes (auto, register)
2. **Day 2:** Storage Classes (static, extern)
3. **Day 3:** Structures (defining structures, why structures)
4. **Day 4:** Structures (initialization, arrays with structures)
5. **Day 5:** Structures (arrays of structures, structures within structures)
6. **Day 6:** Structures (passing structures to functions)
7. **Day 7:** Unions (defining, properties)
8. **Day 8:** Unions (accessing union members, pointer to structures and unions)
9. **Day 9:** Structure Bitfield and Functions inside Structure
10. **Day 10:** Enums (declaration, using enums as a type)

Module V (10 Days)

1. **Day 1:** File Management (what is a file, file structure)
2. **Day 2:** Defining & Opening a File
3. **Day 3:** Input/Output Operations on Files
4. **Day 4:** Input/Output Operations on Files (continued)
5. **Day 5:** Fundamentals of an Operating System (Introduction to OS)
6. **Day 6:** Basic Linux Commands
7. **Day 7:** Process Management in OS
8. **Day 8:** Memory Management in OS
9. **Day 9:** Network Communication in OS
10. **Day 10:** Recap and Practice