Programming in 'C' Language

UNIT - I

Basic Programming Tools: Flowchart and Algorithm, Structured and Procedural Programming Concepts, History and Features of C, General Structure of C program, C character set, C Tokens: Keywords, Identifiers, Literals/Constants, Variable concept, Expression and statement, Various Data types in C (05), enum, Operators and expression: Arithmetic, Relational, assignment, logical, bitwise, sizeof operator, comma operator, ternary operators. Basic I/O functions. Compilation process of C program, Header files, Library functions, Preprocessor directives: #include, #define (05).
Lectures: 11

UNIT - II

Control Statements: If Statement, Switch Statement, Unconditional Branching using goto statement, Construction of loops and implementation While Loop, Do While Loop, For Loop, Break and Continue statements (06) nested loops, Pointer: Declaration, referencing and dereferencing pointer, operations on pointers. storage classes: automatic, register, external and static (05).
Lectures: 11

UNIT - III

Introduction to Arrays: Declaration, Initialization One dimensional array Two dimensional arrays, Matrix Operations. Bubble sort, Selection sort, Insertion Sort. Linear and binary Searching, array of pointers (06). Strings, String operations: length, compare, concatenate, copy etc. Functions: functions prototypes, types of arguments, function call, call by value, call by reference, Recursion, array and function (07).
Lectures: 13

UNIT - IV

Structure Declaration, Initialization, Structure variable, Structure Assignment, Nested Structures, Structures and Functions, Structures and Arrays, typedef, Unions Declarations (06). File handling: Types of file processing: Sequential access, Random access Open, Close, Create, Process, unformatted data file. Command line arguments (06).
Lectures: 12