

B. Sc. 102

Introduction to C Programming

Unit I:

Programming in C: History, Introduction to C Programming Languages, Structure of C programs, compilation and execution of C programs, Debugging Techniques, Data Types and Sizes, Declaration of variables, Modifiers, Identifiers and keywords, Symbolic constants.

Unit II:

Operators: Unary operators, Arithmetic & logical operators, Bit wise operators, Assignment operators and expressions, Conditional expressions, Precedence and order of evaluation. Control statements: if-else, else-if clause, switch, goto statement. Loops: for, while, do-while, break, continue.

Unit III:

Pointer: Pointer notation, value at (*) and address of (&) operator, pointer to pointer. Functions: built-in and user-defined, function declaration and prototype, parameter passing: call by value, call by reference, recursive functions. Dynamic Memory allocation (malloc, calloc, free function)

Unit IV:

Arrays: linear arrays, multidimensional arrays, passing arrays to functions, Strings-Declaration and initialization, Standard library functions, Strings and pointers, Array of strings, Storage classes in C, C preprocessor.

Unit V:

Structure and Union: Structure and Union–Declaration, Initialization, structure within structure, Array of structure, Enumerated data types, Union of structure, File Handling in C: opening and closing a data file, file operations, File I/O, Read, Write and Other file function.

References:

1. C Programming Language : BW Kernighan and D.M.Ritchi
2. C Programming: Balagurusamy
3. Let Us C: Yaswant Kanetekar