

BSc IT First Semester

DSC-1: Concepts of C Programming (LTP::4:0:2)

6 Credits

UNIT I:

Overview of C: Importance of C, basic structure of C program, executing a C program, sample C program,. Constants, variables and data types. C character set, C tokens, identifiers, constants, variables, declaration of variables, assigning values to variables. Data type conversion.

UNIT II:

Operations: Input and output statements, reading a character: getchar(), writing a character: putchar(), formatted and unformatted i/o statements. Arithmetic operators, relational operators. Logical operators, assignment operators, increment and decrement operators, conditional operators, bitwise operators, special operators, precedence of arithmetical expression, relational expression, logical expressions.

UNIT III

Control structures: Decision making and branching, Simple if, if-else, nested if, else-if ladder, switch, nested switch.

Looping: while, do-while and for loop. Jump statements, nested loops.

UNIT IV

Functions: Introduction, types of functions, need for user-defined functions, function call, types of arguments, nesting of functions, a multi function program, recursion, storage classes.

Arrays: Introduction, single dimensional array, two-dimensional arrays, initializing 2-d arrays, multidimensional arrays. Operations on arrays: traversal, insertion and deletion. Searching: linear search & binary search. Sorting: bubble sort, selection sort and insertion Sort.

Texts Books:

1. Problem Solving with C -PHI(EEE). By - M.T.Somashekara, D S Guru, K S Manjunath.
2. E. Balaguruswamy : Programming in ANSI C” Tata Mc Graw-Hill
3. S. ByronGottfried. : “Programming with C”, Tata McGraw-Hill(2000)
4. Yashawant Kanetkar : “Let us C”
5. Brain Verminghan & Dennis M. Ritchie “ANSI C Programming” (PHI)