

ALLIED COURSE – IV – PROGRAMMING IN C

Theory: 60 marks

Int. – 15 marks

Ext. – 45 marks

UNIT – I

Evolution and Applications of C – structure of a C program – Data Types – Declarations – operators – Expressions – Type conversions – Built-in functions.

UNIT – II

Data Input and Output – Control statements: IF, ELSE-IF, GOTO, SWITCH, WHILE, DOWHILE, FOR, BREAK and CONTINUE.

UNIT – III

Functions: Defining and Accessing Arguments – recursive functions – storage classes – Arrays: Defining and processing Arrays – Multidimensional arrays – passing arrays to functions – Arrays and strings – String functions – String Manipulations.

UNIT – IV

Pointers – Pointer Declarations – Operations on pointers – pointers to functions – Pointer and strings – pointers and arrays – array of pointers structures – structures and pointers – unions.

UNIT – V

Data files – Opening, closing and processing files – files with structures and unions – register variables – Bitwise Operations – Macros – Preprocessing.

Text Books Recommended:

1. Programming in C – E. Balagurusamy – Tata McGraw Hill.
2. Programming with C – Byron S. Gottfried – Schaum's outline series – Tata McGraw Hill
3. The Sprit of C – Mullish Cooper – Schaum's outline Series – Tata McGraw Hill
4. A first course in Programming with C – T. Jeyapoovan, Vikas Publishing House.

PROGRAMMING IN C - Practical

Int. – 10 marks

Ext. – 30 marks

C – Practical Programmes

1. Adding two numbers (all cases)
2. Sum of series
3. Ascending and Descending order of numbers using arrays (use it to find largest and smallest numbers)
4. Sorting of names in alphabetical order.
5. Matrix Operations (Addition, Subtraction, Multiplication – use functions).
6. Generating Fibonacci Numbers using recursive functions.
7. String Manipulation without using String functions (String length, String Comparison, String copy, Palindrome checking)
8. Mean, Standard Deviation, Variance.
9. Correlation – regression coefficients.