Paper-III (MIT-103/MCA-103):Introduction to Programming

UNIT - I

Algorithm development: problem identification, algorithms, flow charts, testing and debugging, algorithms for searching (linear and binary), sorting (selection, bubble & insertion), merging of ordered list, analysis of algorithm.

UNIT – II

Programming in C: history, structure of C programs, compilation and execution of C programs, debugging techniques, character set, keywords, data type and variables, expressions, operators, operator precedence and their order of evaluation.

Control statements **-** if-else, switch, break, continue, coma operator, goto statement. Loops **-** for, while, do-while.

UNIT – III

Functions: built-in and user-defined functions function declaration, parameter passing- call by value & call by reference, recursive functions. storage classes - auto, extern, global and static.

Array: one dimensional and multi-dimensional array, array handling, passing arrays to functions, arrays and strings, string-handling functions.

UNIT – IV

Pointers: pointer variable and its importance, pointer arithmetic, array of pointers, function of pointers, structure of pointers, dynamic memory allocation functions, pointer to pointer.

Structures and Union : declaration of structures, pointer to structure, array of structure, pointer to function, self-referential structure, unions, enumeration, macro.

UNIT – V

File handling: opening and closing data file, creating a data file, read and write functions, formatted and unformatted data files, command line arguments.

Recommended books : How to solve it by computer - G. Dromey
Programming with C – Schaum's outline Series