FUNDAMENTALS OF COMPUTER AND PROGRAMMING IN 'C'

UNIT-I

Algorithm, flowchart, Structured Programming Approach, structure of C program (header files, C preprocessor, standard library functions, etc.),identifiers, basic data types and sizes, Constants, variables, arithmetic, relational and logical operators, increment and decrement operators, conditional operator, bitwise operators, assignment operators, expressions, type conversions, conditional expressions, precedence and order of evaluation. Input-output statements, statements and blocks, if and switch statements, loops:-while, do-while and for statements, break, continue, goto, programming examples. [12 Hours]

UNIT-II

Designing structured programs: - Functions, parameter passing, storage classes- extern, auto, register, static, scope rules, user defined functions, recursive functions. Arrays- concepts, declaration, definition, accessing elements, and functions, two-dimensional and multi-dimensional arrays, applications of arrays. pointers- concepts, initialization of pointer variables, pointers and function arguments, address arithmetic, Character pointers and functions, pointers to pointers, pointers and multidimensional arrays, dynamic memory management functions, command line arguments[12 Hours]

UNIT – III

Derived types- structures- declaration, definition and initialization of structures, accessing structures, nested structures, arrays of structures, structures and functions, pointers to structures, self referential structures, unions, typedef, bit fields, C program examples. Input and output – concept of a file, text files and binary files, streams, standard I/O, Formatted I/O, file I/O operations, error handling, C program examples. Text Books: 1. Balagurusamy : "C Programming" Tata McGraw-Hill 2. P. Dey& M. Ghosh, "Computer Fundamental & Programming in C"- Oxford University Press 3. Deitel -"C How to programme" PHI publication/ Pearson Publica