Bridge Course (2 Years MCA) 2020 Course

Part A (10 hrs)

1. Algorithm, flow charts, integers, division, relations, relations and their types, representation of relation in computer memory, number conversion systems.

2. Set theory, predicate logic, Graph terminologies, types of graphs , representation of graph in computers, Paths, Eular and Hamilton graphs, graph colorings.

3. Trees, applications of trees, tree traversal algorithms, minimum spanning trees

Part B - C Basics (20 hrs)

1. Fundamentals of C programming, Keywords and Identifiers, Constants, Variables, Data types, Declaration of variables, Declaration of variables as constant, Operators, Types of operators, Input and Output functions - printf(), scanf(), getchar(), putchar(), Formatted input and formatted output.

2. Control Statements- Sequential, Selection, Iteration Statements, Branching structure- if statement, if-else statement, Nested if-else statement, else if Ladder, Conditional operator, switch statement, Loop control structures- while loop, do-while loop, for loop, Nested for loop, Jump statements- break, continue, goto statements.

3. Function call, return statement, Function parameters, Types of functions, Arrays and functions.

4. Introduction to OOP concepts and simple programs.