

Lesson Plan

Even Semester, Session 2020-21

Name of Professor: Manisha Saini

Class: BCA 4th Semester

Subject code and Name: BCA – 241 Advanced Data Structures

Month	Topics covered
17/04/2021 To 08/05/2021	Unit-I: Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks, Binary search trees: introduction, storage, Searching, Insertion and deletion Binary search tree, Huffman's algorithm, General trees.
10/05/2021 To 29/05/2021	Unit-II: Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs, operations on graphs, traversal algorithms in graphs and their implementation, Warshall's algorithm for shortest path, Dijkstra algorithm for shortest path,
31/05/2021 To 24/06/2021	Unit-III: Sorting: Internal & external sorting, Radix sort, Quick sort, Heap sort, Merge sort, Tournament sort, Comparison of various sorting and searching algorithms on the basis of their complexity.
25/06/2021 To 17/07/2021	Unit-IV: Files: Introduction Attributes of a file, Classification of files, File operations, Comparison of varioust of files, File organization: Sequential, Indexed-sequential, Random-access file. Hashing: Introduction, Collision resolution.

Lesson Plan

Even Semester, Session 2020-21

Name of Professor: Manisha Saini

Class: BSC(NM) 2nd Semester

Subject code and Name: CS-II Logical Organization of Computer

Month	Topics covered
17/04/2021 To 08/05/2021	Unit-I: Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floating-point representation of numbers, BCD Codes, Error detecting and correcting codes, Character Representation — ASCII, EBCDIC.
10/05/2021 To 29/05/2021	Unit- II: Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions - Venn Diagram, Karnaugh Maps.
31/05/2021 To 24/06/2021	Unit – III: Digital Logic: Basic Gates- AND, OR, NOT, Universal Gates - NAND, NOR, Other Gates - XOR, XNOR etc. Combinational Circuits; Half-Adder, Full-Adder, Half- Subtractor, Full-Subtractor, Encoders, Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters.
25/06/2021 To 17/07/2021	Unit – IV: Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type and Master-Slave flip-flops. State table, state diagram. Flip-flop excitation tables. Shift registers: serial in parallel out and parallel in parallel out. Designing counters - Asynchronous and Synchronous Binary Counters, Modulo-N Counters and Up-Down Counters.

