

Teaching Plan

Dept. Of Computer Science

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Discipline : **Computer Science (Hons.)**
Semester : **Fourth**
Paper Code : **CC8P**
Subject : **Design and Analysis of Algorithms**
Name of faculty : **Rakesh Paul**
Duration: **15th March,2023 to 25th June,2023**

Sl No	Topics	No. of Lectures	Duration in Hour
1	Implement Insertion Sort (The program should report the number of comparisons). Implement Merge Sort (The program should report the number of comparisons)	2	4
2	Implement Heap Sort (The program should report the number of comparisons)	2	4
3	Implement Randomized Quick sort (The program should report the number of comparisons)	2	4
4	Implement Radix Sort	2	4
5	Create a Red-Black Tree and perform following operations on it: i. Insert a node ii. Delete a node iii. Search for a number & also report the color of the node containing this number.	2	4
6	Write a program to determine the LCS of two given sequences.	2	4
7	Implement Breadth-First Search in a graph	2	4
8	Implement Depth-First Search in a graph	2	4
9	Write a program to determine the minimum spanning tree of a graph	2	4

Reference Books:

1. Introduction to Algorithms, T.H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein, PHI, 3rd Edition 2009.