**CSE-225 ANALYSIS AND DESIGN OF ALGORITHMS**

Fundamentals of algorithm, asymptotic complexity, recursive algorithms, recurrence relation, heap, priority queue and heap sort. Algorithm Design Techniques their control abstractions and related problems: Divide and conquer, Greedy strategy, Dynamic programming, Backtracking, Branch and bound, least cost search. Introduction to lower-bound theory, Search Trees: BST, AVL, B and B+ trees. Introduction to NP-Complete and NP Hard problems.

**References:**

1. Computer Algorithms Horowitz and Sahani.

2. Introduction to Algorithms Cormen and Rivest

3. An Introduction to Algorithms Thomas H Cormen,Ronald L. Rivest