

1. What are the characteristics of a good algorithm? How we can find the complexity of an algorithm. Discuss various techniques to find out the complexity.
2. Write an algorithm for optimal merge Patterns Using Greedy technique.
3. Discuss internal and external sorting methods and write the algorithm for any one of them.
4. What is 0/1 knapsack problem. Write an algorithm for 0/1 knapsack problem using branch and bound technique.
5. What you understand by the following
 - a) Approximation Algorithms
 - b) Deterministic Algorithms
 - c) NP-complete Problems
6. Explain the following in Brief
 1. Divide and Conquer Technique
 2. Brute Force Method
 3. Definition of Algorithm
 4. Breadth First search
 5. Backtracking
 6. Dynamic Programming
 7. Lower bound Theory
 8. Adversary Arguments
 9. Polynomial Algorithms
 10. Merge Sort