

QUESTION BANK-1 (Data Structures)

1. Given a linked list delete nth node.
2. Recursive algorithm to find length of a linked list
3. Reverse a linked list
4. Merge two sorted linked list
5. Infix to Postfix conversion
6. Evaluation of postfix expression
7. Implement a memory efficient doubly linked list
8. Generating binary numbers using queue
9. Implement a Binary tree and perform traversal
10. BFS and DFS in Tree
11. Finding Diameter and Max Height of a Binary tree
12. Given 2 traversal Sequences Construct the tree
13. Search, Insert, delete a node in Binary Tree, BST
14. Find kth smallest element in BST
15. Find a pair with given sum in BST
16. Merge two balanced BST
17. Perform Heap Sort
18. Implement Binomial and Fibonacci Heap
19. Implement a Graph and perform BFS,DFS on it.
20. Detect a cycle in a graph
21. Detect longest path in directed Acyclic Graph
22. Check whether a graph is bipartite or not
23. Use Topological Sorting
24. Implement AVL tree
25. Strassen's Matrix Multiplication
26. Multiplication of two large integers e.g
45687952567253X2546885345646586
27. Factorial of very large number
28. Generating power Set of a Set

29. Detect a Loop in a Linked List
30. Calculating Complexity of BFS, DFS, Selection Sort, Bubble Sort, Merge Sort, Binary Search, Linear Search, Heap Sort
31. Master Theorem
32. String Matching Algorithm
33. Write the value of the smallest palindrome larger than K to output.
34. Given a number N, print next largest number having all digits same
35. Given an array of integer generate two arrays of equal length having equal sum
36. Solve N Queens problem
37. Solve Travelling Salesman Problem
38. Solve Knapsack Problem
39. Multiply two Polynomials
40. Find most frequent element in an array