**DATA STRUCTURES AND ALGORITHMS**

1. **How to check if a given Binary Tree is BST or not?**
2. **What are the area of applications of Data Structure?**
3. **Height and Level of a Tree.**
4. **Write the stack overflow condition.**
5. **What is the difference between PUSH and POP?**
6. **Write the steps involved in the insertion and deletion of an element in the stack.**
7. **Which notations are used in Evaluation of Arithmetic Expressions using prefix and postfix forms?**
8. **Difference between Array and Array List.**
9. **Are linked lists considered linear or non-linear data structures?**
10. **What are the advantages of Linked List over an array?**
11. **Write the syntax in C to create a node in the singly linked list.**
12. **If you are using C language to implement the heterogeneous linked list, what pointer type should be used?**
13. **What is doubly linked list?**
14. **Write the C program to insert a node in circular singly list at the beginning.**
15. **List some applications of queue data structure.**
16. **What are the drawbacks of array implementation of Queue?**
17. **What are the scenarios in which an element can be inserted into the circular queue?**
18. **What is a dequeue?**
19. **What is Linked List?**
20. **What Is FIFO?**
21. **What is a Data Structure?**
22. **What are linear and non-linear data Structures?**
23. **What are the various operations that can be performed on different Data Structures?**
24. **How is an Array different from Linked List?**
25. **What is Stack and where it can be used?**
26. **What is a Queue, how it is different from stack and how is it implemented?**
27. **What is a Linked List and What are its types?**
28. **Which data structures are used for BFS and DFS of a graph?**
29. **How to implement a stack using queue?**
30. **How to implement a queue using stack?**
31. **Which data structure is used to perform recursion?**
32. **List the area of applications where stack data structure can be used?**
33. **What is an array?**
34. **How to reference all the elements in a one-dimension array?**
35. **What is a multidimensional array?**
36. **What is the minimum number of queues that can be used to implement a priority queue?**
37. **Define the tree data structure.**
38. **List the types of tree.**
39. **What are Binary trees?**
40. **Write the C code to perform in-order traversal on a binary tree.**
41. **What is the maximum number of nodes in a binary tree of height k?**
42. **Which data structure suits the most in the tree construction?**
43. **Write a recursive C function to calculate the height of a binary tree.**
44. **How can AVL Tree be useful in all the operations as compared to Binary search tree?**
45. **State the properties of B Tree.**
46. **What are the differences between B tree and B+ tree?**
47. **List some applications of Tree-data structure?**
48. **Differentiate among cycle, path, and circuit?**
49. **Mention the data structures which are used in graph implementation.**
50. **Which data structures are used in BFS and DFS algorithm?**
51. **What are the applications of Graph data structure?**
52. **In what scenario, Binary Search can be used?**
53. **What are the advantages of Binary search over linear search?**
54. **What are the advantages of Selection Sort?**
55. **List Some Applications of Multilinked Structures?**
56. **What is the difference between NULL and VOID?**
57. **AVL Tree.**