1. Difference between void n null pointer

Null pointer has value null.

Void pointer points to void type data.

1. Applications of stacks, queues n linked list

Stack-infix to postfix,postfix eval,parenthesis matching.

CPU task scheduling

Doubly linked list can be used in **navigation systems** where both front and back navigation is required. It is used by browsers to implement backward and forward navigation of visited web **pages**

1. Number of nodes in a tree of height n
2. Difference between malloc n calloc

**Malloc** function contains garbage value. The memory block allocated by a **calloc** function is always initialized to zero

5. Drawbacks of arrays

1. Types of trees
2. 3 ways of traversing trees and explain any one of them

8. what are heaps

9. memory allocation types and differences with advantages

10. Applications of stack and queue

11. Explain Josephus problem

12. No. of nodes in a height k tree

13. Disadvantages of arrays

14. What is stack and queue?

15. Applications of stack and queue

16. What are linked list?

17. Josephus problem

18. Difference between binarry search tree and binary tree

19. Differmece between malloc and calloc

20. Why does calloc initialize allocated memory to 0

21. Advantages of linked lists

22. Max num of node in tree of height h

23. Uses of heaps

24. What is a binary tree

25. Difference between binary tree and binary search tree

26. Enqueue and dequeue functions too

27. Differmece between null and void pointer

28. Should binary search trees be balanced

29. What does malloc return

30. What are linear data structures

31. What is a balanced binary tree

32. Explain Josephus problem

33. What is a binary search tree

34. No of nodes in a tree of height k

Binary search tree,avl tree,expression tree,n ary tree.

What is heap?

A heap is a binary tree with keys assigned to its nodes(one key per node).

All levels should be full except last level where some rightmost leaves can be missing.

Key at each node greater than , equal to keys of children.

**Binary Tree** follows one simple rule that each parent node has no more than two child nodes, whereas a **Binary Search Tree** is just a variant of the **binary tree** which follows a relative order to how the nodes should be organized **in a tree**.

Josephus problem

N people are standing in a circle. The process begins at some point k in the circle and proceeds around the circle in a clockwise direction.

The person at position k is skipped and the person at position k+1 is removed, then the person at position k+2 is skipped and the person at position k+3 is removed, and so on.

The execution proceeds around the circle (which is becoming smaller and smaller as the executed people are removed) until only one person remains.  
Given the total number of people ‘n’ and a number ‘k’ which indicates the first person who is skipped

the task is to find the place in the initial circle so that you are the last one remaining.