### ****C Programming Questions:****

1. **What are the advantages of Linked List over an array?**
2. **What is doubly linked list?**
3. **Write the C program to insert a node in circular singly list at the beginning.**
4. **Write a recursive C function to count the number of nodes present in a binary tree.**
5. **Write a recursive C function to calculate the height of a binary tree.**
6. **Write the C code to perform in-order traversal on a binary tree.**
7. **Write the steps involved in the insertion and deletion of an element in the stack.**
8. **Write a program in C to count the number of words in a given sentence until EOF is scanned.**

### ****Java Programming Questions:****

1. **What is JAVA?**
2. **What are the features in JAVA?**
3. **Define basic principles of OOPs.**
4. **Why is Java platform independent?**
5. **Why do we not install JVM?**
6. **How does Java enable high performance?**
7. **What are the Java IDE’s?**
8. **What do you mean by Constructor?**
9. **What is meant by Local variable and Instance variable?**
10. **What is a Class?**
11. **What is Polymorphism?**
12. **Difference between overloading and overriding.**
13. **What is meant by Interface?**
14. **What do you mean by public static void main(String args[])?**
15. **What is meant by Abstract class?**
16. **What do you mean by constructor overloading?**
17. **Define types of inheritance.**
18. **Difference between final, finally, finalize.**
19. **Difference between interface and abstract class.**
20. **Difference between Array and ArrayList.**
21. **Difference between String, StringBuilder, and StringBuffer.**
22. **Define mutable and immutable string.**
23. **Explain about Public and Private access specifiers.**
24. **Difference between Default and Protected access specifiers.**
25. **Difference between HashMap and HashTable.**
26. **Difference between HashSet and TreeSet.**
27. **What is meant by Collections in Java?**
28. **What are all the Classes and Interfaces that are available in the collections?**
29. **Explain about the different lists available in the collection.**

### ****Data Structures Questions (C/Java):****

1. **Are linked lists considered linear or non-linear data structures?**
2. **What are the advantages of Linked List over an array?**
3. **What is a Stack and where can it be used?**
4. **What is a Queue, how is it different from Stack, and how is it implemented?**
5. **What is a Linked List and What are its types?**
6. **Which data structures are used for BFS and DFS of a graph?**
7. **How to implement a stack using a queue?**
8. **How to implement a queue using a stack?**
9. **Which Data Structure Should be used for implementing LRU cache?**
10. **How to check if a given Binary Tree is BST or not?**
11. **What are the areas of applications of Data Structure?**
12. **What is the difference between file structure and storage structure?**
13. **Which data structure is used to perform recursion?**
14. **Write the syntax in C to create a node in the singly linked list.**
15. **If you are using C language to implement the heterogeneous linked list, what pointer type should be used?**
16. **Write the stack overflow condition.**
17. **What is the difference between PUSH and POP?**
18. **List the area of applications where stack data structure can be used.**
19. **What is a Dequeue?**
20. **What is the minimum number of queues that can be used to implement a priority queue?**
21. **What is Binary Search?**
22. **What are the advantages of Binary Search over Linear Search?**

### ****General Programming Concepts (C/Java/SQL):****

1. **What is the difference between NULL and VOID?**
2. **What are the different types of control structures in programming?**
3. **What is FIFO?**
4. **What is a Data Structure?**
5. **What are linear and non-linear data structures?**
6. **What are the various operations that can be performed on different Data Structures?**
7. **How is an Array different from Linked List?**
8. **What is the difference between primary key and unique key and why one should use a unique key if it allows only one null?**

### ****SQL Questions:****

1. **What are super, primary, candidate, and foreign keys?**
2. **What is the difference between primary key and unique constraints?**
3. **What is database normalization?**
4. **What are the differences between DDL, DML, and DCL in SQL?**
5. **What is the difference between having and where clause?**
6. **What is Join?**
7. **What is Identity?**
8. **What is a view in SQL? How to create one?**
9. **What are the uses of view?**
10. **What is a Trigger?**
11. **What is a stored procedure?**
12. **What is the difference between Trigger and Stored Procedure?**
13. **What is a transaction? What are ACID properties?**
14. **What are indexes?**
15. **What are clustered and non-clustered indexes?**
16. **Query to find the 2nd highest salary of an employee.**
17. **Why cannot we use WHERE clause with aggregate functions like HAVING?**
18. **What’s the difference between materialized and dynamic view?**
19. **What is embedded and dynamic SQL?**
20. **What is the difference between CHAR and VARCHAR?**
21. **Define Normal Forms.**
22. **What is cardinality?**
23. **View Serializable and View Equivalence.**

**TOTAL QUES =90**