1. Java Memory model VS C++ memory model
2. Memory management in OS
3. Garbage Collector in java
4. Synchronization in java
5. Methods to traverse tree
6. Creating Index in database
7. String parsing program
8. Check if it a binary tree or not
9. Matrix problem
10. There are 3 switches outside the door and 3 bulbs in the house, you need to tell which switch is of which bulb and you can go just one time in the room
11. There are 10 boxes and each box contain 10 coins. 9 boxes have coins of 10gram and 1 box has of 1gram. You have weight machine which can tell weight of box. You can check weight only one time. You need to tell which box has coins of 1gram
12. Encapsulation, inheritance, polymorphism, class VS struct, aggregation, composition and their real time examples.
13. Triggers in database
14. Stored procedures in database
15. WebPage Vs Web Service
16. how to make query efficient
17. Interface VS Abstract Class
18. Overloading VS Overriding
19. Extend and Implement at same time or not in C++/java
20. Can you call static data member from non-static function and vice versa
21. Can we access private static data member outside the class?

    Ans: In the very same way as you define a public static variable in your source(cpp) file.

    int static_demo::a = 1;

    Access specifiers will not give you error while defining the member. Access specifiers control the access of the member variables, defining a static variable is an excpetion which is allowed.

    Your problem is not the definition of the static member. The error is because you are trying to access the private static member inside main. You cannot do that.

    Private members of a class can only be accessed inside the class member functions, the same rule applies even to static members. To be able to modify/access your static members you will have to add a member function function to your class and then modify/access the static member inside it.
22. What is difference between static function and static variable?
23. What is Critical section
24. What is virtual memory
25. What is paging
26. What is BST
27. Complexity of BST

28. If we have 9 balls of same size and 8 of them have same weight. How to find the one light ball in 2 steps using a weight machine.
29. What is DDL and DML
30. Write query to find second highest value(marks) from a table having a single column
31. What is meant by multi-threading?
32. Sequence questions e.g
    178,133,98,73,?
    AZ,ET,YB,?
33. How to swap the values of two variables without using any temporary variable.
34. Write an algorithm for binary search tree(BST).
35. Write a generic algorithm that could fill the matrix of any size in the following way:
36. 1 _ _ 2
37. _ 3 4 _
38. _ 5 6 _
39. 7 _ _ 8
40. Write a code that replaces the values at each index of an array with next available minimum value from array.If there is no minimum available, replace it with 0.
41. If there are 3 bulbs in a room.How can you know that which switch belongs to which bulb.For this you can enter the room only once after switching on the bulb.
42. If there are 10 balls of equal weight except the one which weighs less than the other 9. How can you know that which ball weighs less.And for this,you can weight the balls only 2 times in a physical balance.
43. If there is an efficient antivirus that's capable of detecting almost any virus. Can you make something that this antivirus software wouldn't be able to detect.If yes,what's that?
44. Min-Win Problem:
    Input: An array of integers e.g. [6,5,10,2,3,4]
    Output: An array of same size, replace each integer with its very first minimum integer.
    If there is no minimum integer present after a number, replace it with 0.
    The out of [6,5,10,2,1,4] would be [5,2,2,1,0,0].
45. Reverse stack in O(1).
46. Factory Pattern, Polymorphism pattern, Adapter pattern, Sigleton Pattern + Scenarios of patterns
47. Write a program to read numbers from a file and find the minimum highest number that we can made from that number using the same digits and no of digits. Example;

    Input:
    1234
    4321
    76943

    Output:
    1324
    Not possible
    79346

48. Suppose we are having a matrix like

    X000X
    00XX0
    00000
    XXXX0
    XXX00

    Where a block of X represents a rectangle. If there is a single X with no other X on sides then it is considered a rectangle. In the above matrix there are 5 rectangles.Write program to find rectangles in an nxn matrix.

49. For an unsorted array of 1 billion elements, there is one element that is missing and one which is repeating. Write an algorithm to find the number WITHOUT USING HASHMAPS OR ANY EXTRA SPACE and in Big-O(n).

50. Which data structure you will use to store 1 terabytes of number which are increasing without any extra cost of space and resizing.

51. Suppose there is a plane with two persons A and B. We will throw them out of plane on an infinite road growing from both sides. They have 10 minutes to plan a stratergy to meet after throwing. Once we throw them then they wont be able to see, hear or speak. Plane can move forward/backward and can throw them at any sequence. What strategy should the use.

52. Write an algorithm to find log of a number with base b. Base for log will also be provided.
53. Difference between mutex and semaphores.
54. Difference between information hiding and abstraction.
55. What is the most efficient algorithm for sorting.
56. while(*p++ = *d++); what is this statement doing.
57. What are the two methods for inter-process communication.
    1)Shared Memory 2) Messaging System
58. Compile time VS runtime polymorphism
59. Struct VS class in C++/C#
60. Cookies VS Sessions
61. 5 machines, 5 mins, 5 clothes ----- 100 machines, 100 clothes, minutes???
62. Modules??
63. Types of index?
64. Print 1 to 1000 numbers without using loop
65. Referential integrity is a database concept that ensures that relationships between tables remain consistent. When one table has a foreign key to another table, the concept of referential integrity states that you may not add a record to the table that contains the foreign key unless there is a corresponding record in the linked table. It also includes the techniques known as cascading update and cascading delete, which ensure that changes made to the linked table are reflected in the primary table.