Interview Questions:

Data Bases:

1. Indexing in db.
2. Find max salary.
3. Find 3rd largest number using sub query.
4. Joins, what are the different type of joins, difference between them?
   Will give you tables and ask that apply to fetch the data from one table and the common records in the other table if exists (means you have to apply left or right outer join).
5. Normalization? How to do it? And what are its benefits? Advantages and disadvantages of Normalization
6. Ask to apply sub queries.
7. What are Database anomalies?
8. What are Transactions? TTS Begin, TTS Abort, TTS Commit?
9. What are flat tables?
10. Types of relations that exists between tables? Explain?
11. What are triggers, stored procedures? (if you know this they will be impressed)
12. Primary key, and other keys and there properties?

Object Oriented Programing:

13. Explain how is function memory allocation for class objects performed at backend?
14. Virtual and pure virtual difference.
15. Mutable and immutable data types
16. Const keyword? with example
17. Readonly keyword and Const keyword difference?
18. Inheritance, why do we need it?
19. Reusability, how can we reuse functions, and why?
20. To prevent inheritance what should you have to do?
21. Inheritance? Composition? Difference?
22. Private inheritance?
23. Operator overloading and overriding? Difference and examples?
24. Real time examples polymorphism and inherence?
25. Coupling Cohesion difference and example?
26. Association/ Aggregation/ Composition difference and example?
27. Encapsulation/ Data hiding/ Abstraction difference and example?
28. What is inheritance/polymorphism/composition? Its benefits. When it is used?
29. What is multiple inheritance?(with code)Example other than typical the ones involving typical parent child relationship.
30. Difference btw structures and class. Also tell where to use structures and where to use classes?
31. Pillars of OOP?
32. Diff btw inheritance and composition?
33. Private/Public constructors? Can a constructor be private? Give an example.
34. Private/Public destructors? Can a destructor be private? Give an example.
35. Difference between pointer and array?
36. Convert pointer to const?
37. What are constant pointers?
38. What is static keyword? Static function?

39. Shallow copy deep copy? Difference and how to do each?
40. Boxing? Unboxing?
41. Abstract class? Interface? Difference between both?
42. What is class? What is object? Explain?
43. How can you find out the size of an array? Write syntax?
44. Write pseudo code for printing the names of all the files in a directory? Recursively.

Data Structures and Algorithms:

45. Stack implementation using queue, methods.
46. Queue implementation using Stack, push and pop methods.
47. Delete current node in linked list, and for that you cannot traverse the linked list and you don't have pre pointer.
48. What is managed heap and un-managed heap?
49. Give real time example of a heap?
50. Red Black tree. Explain? Where to use?
51. Construct palindrome without using any data structure.
52. Write code of sorting algorithm (mostly bubble sort is asked).
53. Search and sorting techniques, what is the best?
54. Finding middle node of a link list in one traversal.
55. Finding a cycle in link list.
56. Traversing a BST.
57. Big O of all sorting algorithms.
58. Stacks/ Queues.
59. AVL and Its significance?
60. How to verify that singly link list is a palindrome or not?
61. Differentiate between heap and stack memory?
62. Find 3rdMin from an array of integers?
63. Check whether given string is palindrome or not?
64. Maze game write or explain algorithm?
65. 1->2->3->4->(5)->4->3->2->1
    delete 5 from this linked list but u have only reference of 5.
66. Selection Sort vs Merge Sort.
67. 1, 2,3,4,5 create a binary tree from this data.
68. How to sort the data from Binary Search Tree?
69. Tree traversing (pre, post, in)
70. Static vs Dynamic binding
71. Convert array to min or max heap
72. Dry run of any algorithm they give.
73. What is tree? Binary tree? Binary search tree? Difference between them
74. What is DAG and graphs?
75. Reverse link list?

Operating Systems:

76. Serialization and its benefits?
77. Thread and process difference?
78. What is mutual exclusion?
79. Critical Section? Explain with example?
80. What are semaphores?
81. Scheduling Algorithms?
82. If another tab is opened in the browser is a process is created or a thread?
83. What is Operating System?
84. Explain role of kernel?
85. Deadlock? Explain with example? Ways to prevent and detect dead lock?
86. Process vs Thread?
87. Paging concept in OS?

Analytical:

88. Clock hour, minutes are given u have to calculate angle between them and find difference?
89. Cut a Gold block, so that you can give it to your employee every day of the week. The cuts should be minimum and equal piece of gold should be given in progressive days.
90. You have two logs and two candles. Now just by burning you have to calculate 45 minutes?
91. There are coin or ball problems where you have to tell which coin is the lightest or which ball has different weight among the group using the weight minimum times.
92. Mathematical series, what will be the next number in the given series?
93. Cut a 3D cake into 8 pieces using three cuts only?
94. Divide a rectangle into to two equal half such that some portion of rectangle taken away before cutting?
95. You have 8 balls in which 1 ball is heavy and U have 1 weight machine. Find out in minimum iteration.
96. You have 1 gold bar of 7 grams. You have to pay your 7 day rent from this bar. How many minimum cuts required for this? But you pay the rent for day by day.

Object Oriented and Design

97. Cohesion and Coupling?
98. Singleton pattern, implement it through code?
99. Design patterns you are familiar with and have implemented by yourself.
100. What is smoke testing?
101. What is integrating testing?
102. What is unit testing?
103. Do you have any idea about automated QA?
104. Test cases? Boundary value analysis? Give examples?
105. White, grey and black box testing? Differences and examples where to use?
106. Calculate cyclomatic complexity?
107. Bottom-up and top to down approach?

(If applying for QA position Object Oriented and Design and Software Design and Architecture and Software Quality Analysis should be thoroughly revised)

(If applying for Networking position Computer Networking should be thoroughly revised as they even ask to solve the numericals)

Below is a link that has Interview questions:
https://www.dropbox.com/sh/obccwmyxi2w71wk/AADj9jEAnIfpNf2LB1zcDZ5Ta?dl=0

Also below is a Facebook page that has many Interview questions:
https://www.facebook.com/SoftwareEngineerInterview/

For revision of different subjects refer to the link below and of course to the notes you made!
http://www.geeksforgeeks.org/