VMware @ Technical

VMware Computer Programming MCQ Syllabus Last Year: 29 mins

- C Programming
- C++
- Code Snippets
- Input & Output
- Basics of Oops
- Programming Principles
- Introduction to OS
- File Systems
- RDBMS
- Oracle
- MySQL
- Basics of Networking
- Basics of Routing

One Coding Question-30mins

Sample Coding Questions:

- Given an n x n square matrix, find sum of all sub-squares of size k x k where k is smaller than or equal to n.
- Sort odd numbers in ascending order and even numbers in descending order in an array.
- Conversion from Infix to Postfix
- Find the index of the smallest array element or pivot element in an array for which the sum of all elements to the left and to the right are equal.
- Remove all characters from a string except uppercase letters and digits.

Programs to Practice:

1. Write a program to implement a Queue using two stacks H1 and H2.
2. You are given a Binary Tree "B" with unique values. You're given two nodes for the binary tree. Write a program to find the lowest common ancestor of the two nodes.
3. You're given a Binary Tree "B" with unique values. Write a program to find the longest path consisting of connected nodes with consecutive values. The idea is to find the longest consecutive sequence in the given binary tree.
4. You're given a Binary Tree "B." Write a program to return the mirror of the given binary tree.
5. You're given a sequence of strings. Write a program to find the most repeated string in the given sequence.
6. Write a program to convert a given URL (long) into a shorter version leading to the same web page.
7. In a party of "N" number of people donated as integers, if the same integer denotes couples, write a program to find the single person at the party.
8. For a given number "N," write a program to find out if it is sparse or not. A number is said to be sparse if no two or more bits are in binary representation.

9. You're given an incomplete 9x9 Sudoku frame. Write a program to complete the sudoku accurately.
10. You're given an array A that is both sorted and rotated and has distinct elements. Write a program to find the index of a given element in the array.
11. You're given a boolean matrix of size LxM where cells contain either 1 or 0. Your task is to modify it such that if a given matrix cell m[i][k] is 1, the ith row and the jth column also have the same value of 1.
12. You're given an array consisting of integer elements. Divide the array into two sets such that the difference between the sum of both sets is an absolute minimum.
13. You're given two strings "S" and "K." Write a program to find the longest common substring.
14. A frog can jump either 1, 2, or 3 steps to reach the top. Write a program to find out how many ways it can reach the top.
15. You're given n pairs of numbers. In each pair, the first number is smaller than the second number. A certain pair [a,b] takes numbers from two different pairs [c,d] and [e,f] if c<f. Find out the longest chain that the new set of pairs can form.
16. For a given array arr[], write a program to find the maximum sum increasing subsequence of the array.
17. For a given array of n integers, find the length of the longest increasing subsequence from the array.
18. You're given two strings str1 and str2. Write a program to find the longest subsequence in both the strings.
19. Write a code to compute the square root of a given number.
20. For a given Binary Tree, find out if it is a Binary Search Tree or not.
21. Write a code to convert a given set of integers into their Roman number equivalents.
22. Write a program to reverse the characters of a given string "S."
23. You're given a string containing a set of digits. Write a program to return all possible IP address combinations in the format A.B.C.D where the alphabets are numbers from 0 to 255.

Note: The test pattern of companies may vary from year to year and also depend on the job profile.