Adobe Model Paper Questions

Q1) linked list using recursion.
Q2) Find if a number is divisible my 3, without using $\%$,/ or $*$. You can use atoi().
Q3) 2 integers A and B are given, find the no of bits that need to be flipped in A to get B. (xor a and b and count the number of bits)
Q4) Write a Rotate function for rotating elements in an array, using a reverse function.
Q5) Given 2 sorted arrays A and B with duplicate elements, get C= A -B and does not have duplicates(use a variation of merging 2 arrays and then remove the duplicates.)
Q6) Some routines to swap int pointers.

Q7) Subtraction of 2 base 13 numbers.	
Q8) Min and max nodes of a quad tree.	
Q9) Prove that in a tree no of internal nodes is one less than leaves.	
Q10) A couple of boolean logic proofs	
Q11) Code to see if a binary tree is a BST or not.	
Q12) Switch case program out put	

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Engineering test:
Most of it had algorithms(no code)
Q1) Given an array with some repeating numbers. Like 12,6,5,12,6
output: 12,12,6,6,5
12 shud come before 6 since it is earlier in list. So cant use a dictionary.
Q2) Implement a dictionary manually with a lil overhead.
Q3)finding nth element from end in a list

Q4)inserting an element into a sorted linked list.
In the anal part many questions were based on the rule that square root of 25 is $+5/-5$. Not just 5. Similarly for 1.
Geometry the questions were a lil bit tricky, but they are few that u can ignore them.