

## CS-301 Final Term Exams Preparation Virtual University

Sr	Questions	Answers Choice
1	In a perfectly balanced tree the insertion of a node needs _____ .	A. One rotation B. Two rotations C. Rotations equal to number of levels D. No rotation at all
2	Consider the following array 23 15 5 12 40 10 7 After the first pass of a particular algorithm, the array looks like 15 5 12 23 10 7 40 Name the algorithm used	A. Heap sort B. Selection sort C. Insertion sort D. Bubble sort (
3	There is/are _____ case/s for rotation in an AVL tree,	A. 1 B. 2 C. 3 D. 4
4	Which one is a self-referential data type?	A. Stack B. Queue C. Link list D. All of these
5	If a max heap is implemented using a partially filled array called data, and the array contains n elements ( $n > 0$ ), where is the entry with the greatest value?	A. Data[0] B. data[1] C. data[n-1] D. data[n]
6	If a complete binary tree has height h then its no. of nodes will be,	A. Log (h) B. $2^{\sup h} + 1 - 1$ C. Log (h) - 1 D. $2^{\sup h} - 1$
7	If you know the size of the data structure in advance, i.e., at compile time, which one of the following is a good data structure to use.	A. Array B. List C. Both D. None of the above
8	Each node in a double link list has ,	A. 1 pointer B. 2 pointer C. 3 pointer D. 4 pointers
9	A binary tree with N internal nodes has ____ links ,links to internal node and ____links to external	A. N+1, 2N, N-1 B. N+1, N-1, 2N C. 2N, N-1, N+1 D. N-1, 2N, N+1
10	Here is a small function definition: void f(int i, int &k) { i = 1; k = 2; } Suppose that a main program has two integer variables x and y, which are given the value 0. Then the main program calls f(x,y); What are the values of x and y after the function f finishes?	A. Both x and y are still 0. B. x is now 1 but y is still 0 C. x is still 0, but y is now 2 D. x is now 1 and y is now 2