# CS-301 Final Term Exams Preparation Virtual University

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | Searching of an element in an AVL tree take minimum ____ time (where n is number of nodes in AVL tree) | A. Log<sub>2</sub>(n+1)<br>B. Log<sub>2</sub>(n+1) -1<br>C. 1.44 Log<sub>2</sub>n<br>D. 1.66 Log<sub>2</sub>n |
| 2 | Every AVL is | A. Binary tree<br>B. Complete tree<br>C. None of these<br>D. Binary Search tree |
| 3 | Select the FALSE statement binary tree. | A. Every binary tree has at least one node.<br>B. Every non-empty tree has exactly one root node.<br>C. Every node has at most two children.<br>D. Every non-root node has exactly one parent. |
| 4 | _____ only removes items in reserve order as they were entered | A. Stack<br>B. Queue<br>C. Both of these<br>D. None of these |
| 5 | In case of deleting a node from AVL tree,rotation could be prolong to the root node. | A. yes<br>B. no<br>C. not sure |
| 6 | Here is an array of ten integers: 5 3 8 9 1 7 0 2 6 4 The array after the FIRST iteration of the large loop in a selection sort (sorting from smallest to largest). | A. 0 3 8 9 1 7 5 2 6 4<br>B. 2 6 4 0 3 8 9 1 7 5<br>C. 2 6 4 9 1 7 0 3 8 5<br>D. 0 3 8 2 6 4 9 1 7 5 |
| 7 | Suppose we have a hash table whose hash function is "n% 12",if the number 35 is already in the hash table which of the following numbers would cause a collision ? | A. 144<br>B. 145<br>C. 143<br>D. 148 |
| 8 | We are given N items to build a heap ,this can be done with _____ successive inserts. | A. N-1<br>B. N<br>C. N+1<br>D. N+2 |
| 9 | In complete binary tree the bottom level is filled from_____ | A. Left to right<br>B. Right to left<br>C. Not filled at all<br>D. None of the given option |
| 10 | The maximum number of external nodes for a binary tree of Height H is ____ | A. 2<sup>h</sup><br>B. 2<sup>h</sup>+1<br>C. 2<sup>h</sup>+2<br>D. 2<sup>h</sup>+3 |