Assignment 2

The due date for submitting this assignment has passed. Due on 2016-09-25, 23:30 IST.
As per our records you have not submitted this assignment.

1) 1. Which of the statements below are true? 1 point
(a) Best case of Insertion sort is O(n)
(b) Worst case of Merge sort is O(n^2)
(c) Worst case of Quick sort is O(n^2)
(d) Worst case of Heap sort is O(n^2)

No, the answer is incorrect.
Score: 0
Accepted Answers:

2) Which of the following is not true about comparison based sorting algorithms? 1 point
- The minimum possible time complexity of a comparison based sorting algorithm is O(nLogn) for a random input array
- Any comparison based sorting algorithm can be made stable by using position as a criteria when two elements are compared
- Counting Sort is not a comparison based sorting algorithm
- Heap Sort is not a comparison based sorting algorithm

No, the answer is incorrect.
Score: 0
Accepted Answers:

3) Which of the following is true with respect to the rank of the element? 1 point
(a) Worst case occur when pivot partitions the array in 0, n-1
(b) When pivot partitions the array in size n/2, n/2, the time complexity is O(n)
(c) When pivot partitions the array in 3n/7, 4n/7, the time complexity is O(n)
(d) Rank of 4 in array [1,2,6,4,9,10,-1,0] is 5

No, the answer is incorrect.
Score: 0
Accepted Answers:

https://onlinecourses-archive.nptel.ac.in/noc16_cs24/unit?unit=22&assessment=28
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
all of the above  

4) Suppose we construct a hash table using division method with number of slots in the table equal to 5. The records are 1,5,4,9,13,56,14,54,59,23,45,12,90,91,94. How many element would be present at the 4th slot?  
Note - Slots are numbered from 0.  

5  
6  
3  
5  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  

5) Which of the following traversal outputs the data in sorted order in a BST?  

- Inorder  
- Preorder  
- Postorder  
- None  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
Inorder  

6) We are given a set of n distinct elements and an unlabeled binary tree with n nodes. In how many ways can we populate the tree with the given set so that it becomes a balanced binary search tree?  

0  
1  
\(n\)  
\(n!\)  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
1  

7) Which are the techniques used to handle collision during hashing?  
Note - Select all the possible answers  

- Chaining  
- Division Method  
- Multiplication Method  
- Open Addressing  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
Chaining  
Open Addressing  

8) Which of the following auxiliary sorting algorithm can be used in Radix sort?  
Note - Select all the possible answers  

- Insertion Sort
1. Quick Sort
2. Merge Sort
3. Counting Sort

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Insertion Sort
- Merge Sort
- Counting Sort

9) Which of the following statements are true for Counting Sort? (n and k are usual notations used during the lecture)

Note - Select all the possible answers

- Time Complexity is $O(n)$
- Time Complexity is $O(n+k)$
- Space Complexity is $O(k)$
- Space Complexity is $O(n)$

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Time Complexity is $O(n+k)$
- Space Complexity is $O(k)$

10) Which are the possible algorithms that can be used to sort each bucket in Bucket Sort algorithm?

Note - Select all the possible answers

- Insertion Sort
- Quick Sort
- Merge Sort
- Counting Sort

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Insertion Sort
- Quick Sort
- Merge Sort