

Adichunchanagiri Institute of Technology, Chikmagalur
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Quiz on
Analysis & Design of Algorithms (BCS401)

Academic Year: 2023-24 (Even)

Semester: 4th

Date: 21-07-2024

- is the time complexity of Quick sort
a. $O(1)$ b. $O(n)$
c. $O(\log n)$ d. $O(n * \log n)$
- Merge sort is the example of technique
 a. Divide and Conquer
b. Greedy Algorithm
c. Decrease and Conquer
d. Dynamic Programming approach
- A function that is called to itself.
a. Iterative b. Recursive
c. Self Recursive d. Self Iterative
- In a Max heap the largest key is at...
a. Child Node b. Leaf Node
 c. Root d. Internal Node
- Performance based criteria of algorithm, which has to do with its computing time is complexity
 a. Time b. Space
c. Time and Space d. Tradeoff
- Upper bound is denoted as
 a. Ω B. Θ c. ω d. O
- In Bubble Sort, after each pass, the largest element among the unsorted elements "bubbles up" to which position? You may assume that the elements are being sorted in ascending order.
a. First
 b. Last
c. Middle
d. Can't Say
- Floyd's algorithm is based on method
a. Divide and conquer method
 b. Dynamic programming
c. Greedy method
d. Branch and bound.
- Dijkstra's algorithm is to find
a. All pair shortest path
b. Transitive closure
 c. single source shortest path
d. string matching
- $O(1)$ means computing time is
 a. Constant b. Quadratic
c. Linear d. Cubic
- What do you call the selected keys in the quick sort method?
a. Outer key b. Inner Key
c. Partition key d. Pivot Key
- describes the minimum number of steps that can be executed in an algorithm
a. Average case b. Worst case
c. Time complexity d. Best case

13. Which of the following is called double rotation in AVL tree..

- a. LL and RR
- b. LR and RL
- c. RL and RR
- d. LR and LL

14. What is the necessary condition for a Tree to be a heap?

- a. The tree must be complete.
- b. Every Root value is greater or smaller than the children's value.
- c. Both A and B
- d. None

15. Which sorting algorithm will take least time when all elements of input array are identical? Consider typical implementations of sorting algorithms.

- a. Insertion Sort
- b. Heap Sort
- c. Merge Sort
- d. Selection Sort

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