

Class Test-I (CS4403 Design & Analysis of Algorithms)

Answer all the multiple-choice questions

Points:

10/10

1. What is the time complexity for job sequencing with deadlines?

(2/2 Points)

- ☐ $O(n)$
- ☐ $O(n \log n)$
- ☐ $O(\log n)$
- ☐ $O(n^2)$

2. Which one of the following should be an input for a binary search?

(2/2 Points)

- ☐ Sorted array
- ☐ Unsorted array
- ☐ Binary search tree
- ☐ none of the above

3. How many edges does a spanning tree have? (V = vertices and E = edges)

(2/2 Points)

- ☐ V
- ☐ $V-1$
- ☐ V^2
- ☐ $V/2$

4. What is the space complexity of merge sort algorithm?

(2/2 Points)

- ☐ $O(n \log n)$
- ☐ $O(n)$
- ☐ $O(\log n)$
- ☐ $O(1)$

5. What is the worst-case time complexity of the Quicksort algorithm?

(2/2 Points)

- ☐ $O(n)$
- ☐ $O(n \log n)$
- ☐ $O(n^2)$
- ☐ $O(\log n)$