Question 1

Not yet answered

Marked out of 1.00

1. You are given an unsorted array and want to find a pair that sums to k by sorting and using two pointers. What is the overall time complexity?

- ○ a.   O(log n)
- ○ b.   O(n^2)
- ○ c.   O(n log n)
- ○ d.   O(n)

Question 2

Not yet answered

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2. What is the worst-case time complexity of Binary Search?

- ○ a.   O(1)
- ○ b.   O(sqrt n)
- ○ c.   O(n)
- ○ d.   O(log n)

Question 3

Not yet answered

Marked out of 1.00

3. Linear Search on an unsorted array: Best-case and Worst-case?

- ○ a.   Best O(1), Worst O(n)
- ○ b.   Best O(n), Worst O(1)
- ○ c.   Best O(log n), Worst O(n)
- ○ d.   Best O(n), Worst O(log n)

Question 4

Not yet answered

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4. Insertion Sort on almost sorted data has complexity:

- ○ a.   Always O(n^2)
- ○ b.   Always O(n)
- ○ c.   O(n + k)
- ○ d.   O(n log n)

Question 5

Not yet answered

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5. What is the average-case complexity of Quick Sort with good pivot strategy?

   ○ a.   O(n log n)

   ○ b.   O(n^2)

   ○ c.   O(n)

   ○ d.   O(log n)

Question 6

Not yet answered

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6. Which sorting algorithm is stable and guarantees O(n log n) worst-case?

   ○ a.   Merge sort

   ○ b.   Selection sort

   ○ c.   Quick sort

   ○ d.   Heap sort

Question 7

Not yet answered

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7. What is the time complexity of naive recursive Fibonacci?

   ○ a.   O(2^n)

   ○ b.   O(n^2)

   ○ c.   O(n log n)

   ○ d.   O(n)

Question 8

Not yet answered

Marked out of 1.00

8. Fibonacci with memoization has:

   ○ a.   O(n^2) time, O(n) space

   ○ b.   O(n) time, O(n) space

   ○ c.   O(n) time, O(1) space

   ○ d.   O(2^n) time, O(1) space

Question 9

Not yet answered

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9. BFS on adjacency list graph takes:

- ○ a. O(E log V)
- ○ b. O(V^2)
- ○ c. O(V + E)
- ○ d. O(V log V)

Question 10

Not yet answered

Marked out of 1.00

10. Dijkstra's algorithm using a binary heap takes:

- ○ a. O(E^2)
- ○ b. O(V + E)
- ○ c. O(E log V)
- ○ d. O(V^2)