DSA

QUIZ: 2

1. Which of the following are examples of linear data structures? (Select all that apply)

a) Arrays

b) Linked Lists

c) Stacks

d) Trees

2. In the context of searching algorithms, which of the following algorithms are used for searching in a sorted list? (Select all that apply)

a) Binary Search

b) Linear Search

c) Jump Search

d) Hashing

3. Which of the following are valid methods for resolving collisions in a hash table? (Select all that apply)

a) Open Addressing

b) Separate Chaining

c) Linear Probing

d) Depth-First Search

4. When implementing a graph, which of the following representations can be used? (Select all that apply)

a) Adjacency Matrix

b) Adjacency List

c) Incidence Matrix

d) Breadth-First Search (BFS)

5. Which of the following sorting algorithms are comparison-based? (Select all that apply)

a) Merge Sort

b) Counting Sort

c) Quick Sort

d) Radix Sort

6. Which of the following data structures can be used to implement a priority queue? (Select all that apply)

a) Binary Heap

b) Linked List

c) Queue

d) AVL Tree

7. Which of the following are examples of dynamic programming problems? (Select all that apply)

a) Fibonacci Sequence

b) Finding the Shortest Path in a Graph

c) Tower of Hanoi

d) Knapsack Problem

8. Which of the following are characteristics of a greedy algorithm? (Select all that apply)

a) It makes the locally optimal choice at each step.

b) It always guarantees the globally optimal solution.

c) It is typically used for problems with optimal substructure.

d) It may not always lead to the best possible solution.

ANSWERS

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