Greedy algo Quiz

Difficulty: basic
Type: FILL

Score: 0.0%

1. Greedy algorithms always make the _____ optimum choice at each step.

Your answer: d
Correct answer: locally

Explanation: Greedy algorithms focus on the immediate best option without considering the overall impact.

2. In the Activity Selection problem, activities are sorted according to their _____ times.

Your answer: h
Correct answer: end

Explanation: Sorting by end times allows for selecting the maximum number of non-overlapping activities.

3. A potential downside of greedy algorithms is that they may not always achieve the _____ optimum solution.

Your answer: s
Correct answer: global

Explanation: Local optimization doesn't guarantee finding the best overall solution.

4. In the Fractional Knapsack problem, the items are sorted based on their _____ ratio.

Your answer: d
Correct answer: value-to-weight

Explanation: This ratio helps maximize the total value within the knapsack's capacity.

5. To minimize the sum of absolute differences in pairing elements from two arrays, both arrays should be _____.

Your answer: d
Correct answer: sorted

Explanation: Sorting minimizes the differences between paired elements.

6. In the Maximum Length Chain of Pairs problem, a pair (c, d) can follow (a, b) if _____.

Your answer: d
Correct answer: b < c

Explanation: This condition ensures the formation of a valid chain of pairs.

7. In the Indian Coins problem, to minimize the number of coins, the denominations should be considered in _____ order.

Your answer: f
Correct answer: descending

Explanation: Larger denominations are used first to reduce the total number of coins.

8. The Job Sequencing problem aims to maximize _____ given deadlines and profits for each job.

Your answer: d
Correct answer: profit

Explanation: Jobs are scheduled strategically to achieve the highest possible profit.

9. In the Chocolate problem, to minimize breaking cost, _____ cuts should be made first.

Your answer: d
Correct answer: expensive

Explanation: Prioritizing expensive cuts reduces the overall cost.

10. The number of breaks required to divide a chocolate bar with m x n squares into individual squares is _____.

Your answer: d
Correct answer: m + n - 2

Explanation: m-1 vertical breaks and n-1 horizontal breaks are needed.