GUVI Training Contest Preparation Guide

This document provides guidance and predictions for the upcoming GUVI training selection assessment scheduled on 17-09-2025. It includes question categorization, probable contest patterns, and preparation strategy.

# 1. High Probability Questions (Most Likely to Appear)

These are very common questions for screening and are highly likely to appear. Expect at least 3 out of 5 questions to come from this section.

* - Reverse string
* - Find max in array
* - Check palindrome string
* - Second largest in array
* - Sum of digits
* - Print Fibonacci series
* - Find factorial number
* - Missing number sequence
* - Check anagram strings
* - Find duplicate in array

# 2. Medium Probability Questions (One or Two May Appear)

These test intermediate-level logic and may be included as the hardest problem in the test.

* - Longest unique substring
* - Intersection of arrays
* - Implement binary search
* - Merge sorted arrays
* - Middle of linked list
* - Check prime number
* - Greatest common divisor
* - Merge overlapping intervals
* - Kth largest element
* - Longest palindromic substring
* - Balanced parentheses check
* - Subarray with sum
* - Maximum subarray sum
* - Peak element array

# 3. Low Probability Questions (Unlikely for This Round)

These are too advanced for an initial selection test and are more suitable for later training phases.

* - Height-balanced binary tree
* - Minimum in rotated array
* - Median of sorted arrays
* - Queue using two stacks
* - Symmetric binary tree
* - Lowest common ancestor
* - Count islands in grid
* - Stack using two queues
* - Permutations of string
* - Kth smallest in BST
* - Count 1s in binary
* - Convert tree to DLL
* - Longest increasing subsequence
* - Flatten multilevel list
* - Maximum product subarray
* - Median of data stream
* - Unique triplets sum zero
* - Minimum window substring
* - Serialize and deserialize tree
* - LRU cache implementation
* - Maximum path sum
* - Longest common subsequence
* - Shortest path Dijkstra
* - Count inversions array
* - Check power of two
* - Implement Trie

# 4. Predicted Contest Questions for 17-09-2025

Likely contest lineup based on 90-minute format:

|  |  |  |
| --- | --- | --- |
| Slot | Problem Type | Example Question |
| Q1 | Warm-up | Reverse string |
| Q2 | Array basic | Find second largest in array |
| Q3 | String logic | Check anagram strings |
| Q4 | Medium DS/Algo | Merge sorted arrays / Balanced parentheses |
| Q5 | Math/Greedy | Maximum subarray sum / Missing number sequence |

Most probable combination: Reverse String + Second Largest + Anagram Check + Balanced Parentheses + Maximum Subarray Sum

# 5. Preparation Plan (Final 48 Hours)

## Day 1 – Basics

- Strings: Reverse, palindrome, anagram  
- Arrays: Second largest, missing number, duplicate detection  
- Math: Sum of digits, factorial, prime check, GCD

## Day 2 – Medium Logic

- Kadane’s Algorithm: Maximum subarray sum  
- Two-pointer: Merge sorted arrays, intersection of arrays  
- Stacks: Balanced parentheses  
- Hashing: Frequency maps and subarray sum checks

# 6. Contest Strategy

1. Start with the easiest problem first to secure points quickly.  
2. Leave hard problems for later to avoid getting stuck.  
3. Suggested time allocation:  
 - Q1 + Q2: 20 minutes  
 - Q3 + Q4: 45 minutes  
 - Q5: 20–25 minutes