

level wise approach for DSA:

LEVEL 1 — Speed & Accuracy on Standard Patterns

You are ready to move forward when:

1 You can solve 80% of Medium Questions in:

- **20–25 minutes** thinking time
- **10–15 minutes** coding time

2 You can identify the pattern in under 2 minutes.

Example:

- see sliding window question → immediately recognize
- see BFS shortest path → immediately map to BFS
- see constraints + sorted → immediately think binary search
- see tree + dp → immediately think postorder

3 Your “wrong submission rate” is under 10%

If you're debugging small syntax errors → fine.

If you're debugging logic for 20 minutes → NOT ready.

4 Classic DP feels routine

LIS, LCS, knapsack, partition DP should feel **routine**, not challenging.

LEVEL 2 — Pattern Recognition Consistency

You are ready if:

1 Out of 10 random LeetCode mediums, you can categorize at least 8 correctly:

- “This is sliding window”
- “This is multi-source BFS”
- “This is DP on sorted input”
- “This is tree DFS”
- “This is prefix-sum optimization”

2 You do NOT get stuck asking “What approach should I start with?”

If you still start by brute-forcing or trying random stuff → wait.

You show zero confusion between similar patterns

Example:

- sliding window vs prefix sum
 - DP vs greedy
 - binary search on answer vs monotonic queue
 - backtracking vs DP
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LEVEL 3 — Mental Capacity / Stress-Test Check

This is the Google-level filter.

You're ready **ONLY** if:

You can solve 5 problems back-to-back without mental fatigue

Google interviews require mental stamina.

You don't panic when you see a new twist

For example:

- adding weights to a BFS
- constraints that break greedy
- a DP that needs optimization
- problem mixing heap + sorted array

Your mind feels "light" while solving mediums

If you feel heaviness after 2 questions → don't jump yet.

 **If you meet ALL the above 3 levels → move to advanced patterns.**

Criteria: 4 questions in an hour

below are the assessment questions:

3, 209, 424, 1004, 1208, 1838, 1438, 1493, 1456, 713,
11, 15, 16, 18, 977, 125, 680, 283, 167, 345,
34, 33, 74, 162, 410, 1011, 875, 2300, 774, 1283,
560, 523, 974, 1248, 1658, 930, 1371, 1524, 325, 2090,
70, 198, 213, 516, 131, 139, 322, 300, 377, 688,

115, 221, 309, 152, 518, 416, 264, 403, 673, 714,
200, 133, 417, 130, 994, 210, 207, 802, 1971, 1162,
1091, 127, 934, 778, 864, 743, 1293, 505, 1263, 542,
543, 110, 236, 124, 98, 105, 230, 102, 199, 297,
621, 767, 502, 871, 1353, 630, 1405, 857, 1383, 1834,
84, 739, 901, 503, 316, 1130, 42, 239, 907, 456,
56, 253, 57, 435, 252, 452, 826, 1288, 1385, 948,
1, 49, 347, 819, 1244, 525, 560, 781, 846, 2043.

below are disguised harder patterns:

- **LIS** – 300,354,1691,1713,1626,960,368,1027,673
- **LCS** – 1143,1035,718,583,712,1092,97,115,1062
- **Knapsack** – 416,494,474,879,956,1049,1449
- **Interval DP** – 312,1000,1547,1039,516,1130,1246
- **Tree DP** – 124,968,337,834,2246,1372
- **Bitmask DP** – 847,1125,1723,1434,879,2098
- **Monotonic Stack** – 84,85,739,901,1856,228
- **Sliding Window** – 992,1234,1100,1493,1358
- **Prefix/Hashing** – 560,1248,525,1590,523
- **Graph + DP** – 787,743,1631,882,1514