



All India SDE test series

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th Test Syllabus

Active Date: 8th June 2019, **Active till:** 8th June 2020

Theme: Through my actions.

Topic #1 - Logic building for programming

- ✓ Solve a problem through general problem-solving techniques such as restating the problem, dividing the problem into sub-problems, looking for analogies, etc.
- ✓ Solve problems logically with arrays.
- ✓ Solve problems logically with pointers and dynamic memory.

Topic #2 - Logical reasoning.

- ✓ Solve problems by applying pure binary logic and logical sequence & matching.
- ✓ Solve problems involving logical reasoning around seat arrangement, blood relations, venn diagrams, cubes, clocks, calendars, numbers and letter series.

Topic #3 - Core computer science - Data structures.

- ✓ Implement arrays, linked lists, stacks and queues through real-world coding challenges.
- ✓ Identify data structures in a given real-world application (e.g, Finding data structures used in a dropbox-like application, a notification system like Facebook or a CPU task scheduler)
- ✓ Implement a binary tree, binary search tree, hash table and heaps through real-world coding challenges.

Topic #4 - Core computer science - Algorithms.

- ✓ Solve problems using and greedy algorithms.
- ✓ Solve problems using string and pattern searching algorithms.

Topic #5 - Core computer science - Dynamic programming.

- ✓ Code dynamic programming challenges using recursion techniques.
- ✓ Code dynamic programming challenges using memoization techniques.
- ✓ Code dynamic programming challenges using tabulation techniques.
- ✓ Improve the time and memory complexity of a DP problem.

Topic #6 - Core computer science - System design.

- ✓ Define data model of a software system.
- ✓ Answer problems related to high-level and component design.
- ✓ Identify and resolve system design bottlenecks using computer science skills.

Topic #7 - High-order thinking.

- ✓ Use the knowledge level of bloom taxonomy and comprehend the knowledge to justify certain possibilities.
- ✓ Think of an application level from the knowledge and comprehension level of bloom taxonomy for the given case study

Topic #8 - Communication and cognitive skills.

- ✓ Answer workplace-like situational or scenario-based questions that involve best practices for communication.
- ✓ Answer situational questions that check your cognitive skills.
- ✓ Play a game to show your sustained attention and concentration skills.

Topic #9 - Tech interview round & tech puzzles.

- ✓ Answer common technical questions asked from candidates' recent projects.
- ✓ Answer architecture-based questions concerning your views on performance and optimization.
- ✓ Solve a technical puzzle with pen and paper.
- ✓ Write a pseudocode for a given technical question or a technical programming puzzle.

Topic #10 - HR interview round & business puzzles.

- ✓ Answer STAR-based questions asked by HR managers.
- ✓ Solve a business puzzle using pen and paper.