Placement Guide

Placement Preparation Roadmap

If you're getting ready for placements, this roadmap will help you cover everything step by step — from aptitude to HR.
Let's make it simple and focused.

1. Aptitude Round

Main Goal: Get fast and accurate with numbers — because this is the first filter in almost every company.
Best Resource: indiabix
Topics to Focus On:

- *Numbers, Simplification & Approximation*
- *Percentages, Ratio & Proportion, Averages*
- *Simple & Compound Interest, Profit & Loss*
- *Time, Speed & Distance, Time & Work*
- *Pipes & Cisterns, Boats & Streams*
- *Probability, Permutation & Combination*
- *Algebra, Geometry, Mensuration*
- *Data Interpretation*
- *Logical Reasoning → Puzzles, Seating Arrangement, Blood Relations, Coding-Decoding, Syllogisms*

Tip:
Start with 2–3 topics a week. Focus on understanding first, then speed.
Take short mock tests on weekends to check your progress.

2. Technical Core Subjects

This round tests how well you understand your basics — not how much you've memorized.
So focus on concept clarity and real-life examples.
Resource: geeksforgeeks (you'll find everything here!)

Operating System

- *Process vs Thread*
- *Deadlock (conditions, prevention, detection)*
- *Scheduling Algorithms – FCFS, SJF, Round Robin, Priority*
- *Paging, Segmentation, Virtual Memory*
- *Page Replacement Algorithms*
- *Inter-Process Communication (IPC)*

Computer Networks

- *OSI vs TCP/IP*
- *TCP vs UDP*
- *IP Addressing (ipv4, ipv6, Subnetting basics)*
- *DNS, DHCP, ARP*

- *Congestion Control*
- *HTTP vs HTTPS*
- *Hub vs Switch vs Router*

DBMS

- *Normalization (1NF–BCNF)*
- *SQL Queries – Joins, Subqueries, Group By, Having*
- *Transactions (ACID properties)*
- *Primary Key, Foreign Key, Unique Key*
- *Triggers, Views, Stored Procedures*
- *ER Model basics*

OOPS Concepts

- *4 Pillars: Encapsulation, Abstraction, Inheritance, Polymorphism*
- *Overloading vs Overriding*
- *Abstract Class vs Interface*
- *Constructor vs Destructor*
- *Real-life examples*
- *Access Specifiers*

Pro Tip: Try to relate every concept to a real-world example
It helps you remember and explain better in interviews.

3. Data Structures & Algorithms (DSA)

This is where you stand out.
Companies love candidates who can think logically and code efficiently.
Resource: leetcode (or codestudio if you prefer topic-wise problems)
Must-Know Topics:

- *Arrays: Two Pointers, Sliding Window, Prefix Sum*
- *Strings: Palindrome, Anagram, Pattern Matching*
- *Hashing: Frequency Count, Subarray Sum*
- *Recursion & Backtracking: Subsets, Permutations, N-Queens*
- *Searching & Sorting: Binary Search, Merge Sort, Quick Sort*
- *Linked List: Reversal, Cycle Detection, Merge Two Lists*
- *Stack & Queue: Next Greater Element, Min Stack, LRU Cache*
- *Binary Tree/BST: Traversals, LCA, Diameter*
- *Heap: Kth Largest/Smallest, Top-K Elements*
- *Graphs: BFS, DFS, Dijkstra*
- *Dynamic Programming:*
  - *1D (Fibonacci, Climbing Stairs)*
  - *2D (Grid Paths, Minimum Path Sum)*
  - *Knapsack, LCS, Edit Distance*

Tip: Solve 2 questions daily.
Don't jump into hard problems right away master the patterns first.

4. HR Interview Round

This is where they judge you — your mindset, clarity, and confidence.
Your answers should feel natural, not memorized.
Resource: indiabix HR Interview Questions
Most Common Questions:

1. *Tell me about yourself.*

2. *Why should we hire you?*
3. *What are your strengths and weaknesses?*
4. *Where do you see yourself in 5 years?*
5. *Tell me about a challenging situation you faced.*
6. *Why do you want to join this company?*
7. *Explain your final year project or internship.*
8. *What are your salary expectations?*
9. *Do you have plans for higher studies?*
10. *Do you prefer working in a team or individually?*