

# Top 70 Interview Questions for Placement Preparation

## For B.E. Computer Science Graduates

Includes Conceptual, Coding, Algorithm, and MAANG-Level Questions with Company & Year Tags

### 1. Core Computer Science Concepts

#	Question	Company	Year
1	Difference between process and thread.	Infosys	2023
2	Explain OOP principles with examples.	TCS	2022
3	What are access specifiers in Java/C++?	Wipro	2021
4	What is recursion? When should it be avoided?	Accenture	2020
5	Explain stack vs heap memory.	Cognizant	2023
6	What is virtualization in OS?	Capgemini	2022
7	Difference between compiler and interpreter.	Tech Mahindra	2021
8	Explain normalization (1NF–3NF) in DBMS.	Infosys	2023
9	What is DNS and how does it work?	Amazon	2020
10	Define Big-O notation and its significance.	Google	2021
11	What is deadlock? List the conditions.	TCS	2024
12	Explain polymorphism with example.	Wipro	2022
13	Difference between REST and SOAP APIs.	Accenture	2023
14	What are microservices?	Microsoft	2022
15	Difference between TCP and UDP.	Infosys	2020

### 2. Programming Fundamentals & Code Tracing

#	Question	Company	Year
16	Reverse a string without library functions.	TCS	2023
17	Find largest of three numbers using conditional operators.	Wipro	2022
18	Check for palindrome in C.	Capgemini	2021
19	Count vowels in a sentence (Python).	Infosys	2024
20	Swap two numbers without temp variable (Java).	Accenture	2022
21	Find factorial using recursion.	Cognizant	2020
22	Trace output: pre/post-increment in C.	Wipro	2023
23	Sum of digits of a number.	TCS	2022
24	Check if a number is prime.	Infosys	2021
25	Find duplicates in an array.	Accenture	2024
26	Merge two sorted lists (Python).	Amazon	2021
27	Fibonacci series using iteration.	TCS	2020
28	Reverse a linked list (Java).	Cognizant	2023

29	Find missing number in sequence 1-n.	Google	2021
30	Check if strings are anagrams.	Microsoft	2022

### 3. Data Structures & Algorithms

#	Question	Company	Year
31	Implement binary search.	TCS	2023
32	Time complexity of quicksort vs mergesort.	Infosys	2022
33	Find middle element of linked list.	Wipro	2023
34	Stack operations using arrays.	Cognizant	2021
35	Implement circular queue.	Accenture	2022
36	Implement DFS and BFS.	Tech Mahindra	2023
37	Detect loop in linked list.	Amazon	2022
38	Merge two sorted arrays.	Microsoft	2023
39	Implement LRU Cache.	Google	2021
40	Maximum subarray sum (Kadane's Algorithm).	Meta	2022
41	Find intersection of two arrays.	TCS	2024
42	Binary tree traversal (in/pre/post order).	Infosys	2023
43	Find height of binary tree.	Amazon	2020
44	Explain heap sort.	Wipro	2022
45	Check if binary tree is balanced.	Google	2022
46	First non-repeating character in string.	Meta	2023
47	Count number of set bits.	Amazon	2021
48	Rotate matrix by 90 degrees.	Microsoft	2022
49	Implement min heap.	TCS	2023
50	Detect cycle in directed graph.	Google	2024
51	Find kth smallest element in array.	Amazon	2022
52	Implement two stacks in one array.	Infosys	2020
53	Topological sort algorithm.	Microsoft	2021
54	Dynamic programming example.	Wipro	2023
55	Validate balanced parentheses.	Accenture	2024

### 4. Database, OS & Networking

#	Question	Company	Year
56	SQL: fetch second highest salary.	TCS	2022
57	Explain ACID properties.	Infosys	2023
58	Difference between DELETE, TRUNCATE, DROP.	Wipro	2020
59	What is deadlock and prevention?	Accenture	2023
60	Explain page replacement algorithms.	Cognizant	2021
61	What is context switching?	Tech Mahindra	2023

62	Difference between IPv4 and IPv6.	Capgemini	2022
63	Explain DNS resolution.	Amazon	2021
64	SQL joins (inner/left/right).	Infosys	2023
65	Count employees per department.	Wipro	2022

## 5. MAANG / FAANG-Level Coding & System Design

#	Question	Company	Year
66	Find two numbers that sum to target.	Google	2022
67	Longest substring without repeating chars.	Amazon	2023
68	Design URL shortener (system design).	Meta	2021
69	Serialize and deserialize binary tree.	Microsoft	2023
70	Find median of two sorted arrays.	Google	2024