

# TCET 2026 Test Series:

## Questions:

### Technical

Q.1) What is a characteristic of a singly linked list?

- [A] Only forward traversal
- [B] Forward and backward traversal
- [C] Circular traversal
- [D] None of the above

Q.2) Which of the following is true about a circular linked list?

- [A] Has no end
- [B] Has no beginning
- [C] All nodes connect back to head
- [D] Has no cycle

Q.3) Which data structure is used for implementing undo functionality in applications?

- [A] Queue
- [B] Stack
- [C] Linked List
- [D] Graph

Q.4) What is the main advantage of a linked list over an array?

- [A] Fixed size
- [B] Dynamic size
- [C] Easy access
- [D] Faster indexing

Q.5) In a doubly linked list, how many pointers does each node have?

- [A] 1
- [B] 2
- [C] 3
- [D] 4

Q.6) Which traversal method processes the root node before its children?

- [A] Pre-order
- [B] In-order
- [C] Post-order

[D] Breadth-first

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Q.7) What type of binary tree has all levels completely filled?

[A] Full Binary Tree

[B] Binary Search Tree

[C] Complete Binary Tree

[D] AVL Tree

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Q.8) Which tree traversal uses a stack data structure?

[A] In-order

[B] Breadth-first

[C] Post-order

[D] Heap Sort

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Q.9) What is the height of a tree with only one node?

[A] 0

[B] 1

[C] 2

[D] 3

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Q.10) What is the time complexity of searching in a balanced binary search tree?

[A]  $O(\log n)$

[B]  $O(n^2)$

[C]  $O(1)$

[D]  $O(n \log n)$

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Q.11) Which data structure is commonly used to represent a graph?

[A] Queue

[B] Stack

[C] List

[D] Array

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Q.12) In which graph traversal is a queue typically used?

[A] Depth-first search

[B] Breadth-first search

[C] Dijkstra's

[D] Kruskal's

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Q.13) What is a spanning tree of a graph?

[A] A subgraph

[B] A cycle

[C] A subgraph with no cycles

[D] A graph with cycles

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Q.14) Which algorithm finds the shortest path in a weighted graph?

[A] Dijkstra's

[B] Prim's

[C] Kruskal's

[D] Bellman-Ford

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Q.15) Which of the following is a property of a connected graph?

[A] No cycles

[B] Connected edges

[C] At least one edge

[D] No isolated nodes

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Q.16) Which searching algorithm works on sorted arrays only?

[A] Binary Search

[B] Linear Search

[C] Jump Search

[D] Exponential Search

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Q.17) What is the best-case time complexity of linear search?

[A]  $O(1)$

[B]  $O(n)$

[C]  $O(\log n)$

[D]  $O(n \log n)$

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Q.18) Which search algorithm uses a divide-and-conquer approach?

[A] Binary Search

[B] Linear Search

[C] Jump Search

[D] Exponential Search

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Q.19) What is the worst-case time complexity of binary search?

[A]  $O(\log n)$

[B]  $O(n^2)$

[C]  $O(1)$

[D]  $O(n \log n)$

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Q.20) Which algorithm is most efficient for searching in a sorted linked list?

[A] Binary Search

[B] Linear Search

[C] Jump Search

[D] Exponential Search

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Q.21) Which sorting algorithm has the worst-case time complexity of  $O(n^2)$ ?

[A] Bubble Sort

[B] Selection Sort

[C] Merge Sort

[D] Heap Sort

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Q.22) What is the time complexity of merge sort in the worst case?

[A]  $O(n \log n)$

[B]  $O(n^2)$

[C]  $O(n)$

[D]  $O(1)$

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Q.23) Which sorting algorithm uses a pivot element?

[A] Quick Sort

[B] Heap Sort

[C] Radix Sort

[D] Insertion Sort

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Q.24) Which algorithm is stable and uses the divide-and-conquer method?

[A] Merge Sort

[B] Quick Sort

[C] Heap Sort

[D] Bubble Sort

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Q.25) Which of these sorting algorithms is non-comparison based?

[A] Insertion Sort

[B] Radix Sort

[C] Merge Sort

[D] Shell Sort

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Q.26) Which SQL keyword is used to retrieve unique records?

[A] SELECT

[B] DISTINCT

[C] ORDER BY

[D] LIMIT

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Q.27) What does the SQL command 'DELETE' do?

[A] Deletes table

[B] Deletes rows

[C] Deletes columns

[D] Deletes database

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Q.28) Which SQL constraint is used to ensure all values in a column are different?

[A] PRIMARY KEY

[B] FOREIGN KEY

[C] NOT NULL

[D] DEFAULT

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Q.29) What does 'JOIN' in SQL do?

[A] Combines tables

[B] Deletes rows

[C] Filters data

[D] Creates a table

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Q.30) What is the purpose of the 'GROUP BY' clause in SQL?

[A] Filter rows

[B] Group values

[C] Sorts data

[D] Aggregate data

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Q.31) Which of the following manages hardware and software resources in a computer system?

[A] Kernel

[B] Shell

[C] Scheduler

[D] BIOS

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Q.32) What is a deadlock in operating systems?

[A] Resource allocation

[B] Deadlock prevention

[C] Infinite loop

[D] Resource deadlock

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Q.33) Which scheduling algorithm is preemptive by nature?

[A] FIFO

[B] Round Robin

[C] Shortest Job First

[D] First Come First Serve

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Q.34) What is the primary purpose of a process scheduler in an OS?

[A] Manage files

[B] Control tasks

[C] Execute processes

[D] Allocate memory

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Q.35) Which memory management technique divides memory into fixed-size blocks?

[A] Paging

[B] Segmentation

[C] Fragmentation

[D] Compaction

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Q.36) What does TCP stand for in networking?

[A] Transmission Control Protocol

[B] Transport Control Protocol

[C] Text Control Protocol

[D] Transfer Control Protocol

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Q.37) Which protocol is used for secure communication over the internet?

[A] SMTP

[B] HTTP

[C] FTP

[D] SSH

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Q.38) What is the main purpose of an IP address?

[A] To identify devices

[B] To establish connections

[C] To encrypt data

[D] To send emails

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Q.39) What does DNS stand for in networking?

[A] Dynamic Naming Service

[B] Domain Name System

[C] Data Network Service

[D] Directory Naming Service

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Q.40) Which layer of the OSI model handles routing of data packets?

[A] Application Layer

[B] Network Layer

[C] Session Layer

[D] Data Link Layer

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Q.41) Which data structure can be used to detect cycles in a graph?

[A] Stack

[B] Queue

[C] Deque

[D] Priority Queue

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Q.42) What type of tree has nodes with at most two children?

[A] Binary Tree

[B] AVL Tree

[C] Trie

[D] Red-Black Tree

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Q.43) What is the space complexity of a depth-first search on a graph?

[A]  $O(V + E)$

[B]  $O(n)$

[C]  $O(\log n)$

[D]  $O(n^2)$

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Q.44) Which sorting algorithm is the fastest for small datasets?

[A] Insertion Sort

[B] Bubble Sort

[C] Quick Sort

[D] Selection Sort

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Q.45) In SQL, which function returns the number of rows in a table?

[A] SUM()

[B] COUNT()

[C] AVG()

[D] MAX()

Q.46) Which OS component handles user interactions and I/O requests?

[A] Shell

[B] Scheduler

[C] Kernel

[D] BIOS

Q.47) What does HTTP stand for in web communication?

[A] Hypertext Transfer Protocol

[B] Hyper Text Transfer Protocol

[C] Secure Hyper Transfer Protocol

[D] Hyperlink Transfer Protocol

Q.48) What is the time complexity of bubble sort in the best case?

[A]  $O(n)$

[B]  $O(n \log n)$

[C]  $O(\log n)$

[D]  $O(1)$

Q.49) Which data structure supports both LIFO and FIFO operations?

[A] Deque

[B] Queue

[C] Stack

[D] Priority Queue

Q.50) Which of these SQL commands is used to create a table?

[A] SELECT INTO

[B] CREATE

[C] ALTER

[D] DROP

# TCET 2026 Test Series:

Answers:

**Technical**



Q.1)A	Q.2)A	Q.3)A	Q.4)A	Q.5)A	Q.6)A	Q.7)A	Q.8)A	Q.9)A	Q.10)A	Q.11)A	Q.12)A	Q.13)A	Q.14)A	Q.15)A
Q.16)A	Q.17)A	Q.18)A	Q.19)A	Q.20)A	Q.21)A	Q.22)A	Q.23)A	Q.24)A	Q.25)A	Q.26)A	Q.27)A	Q.28)A	Q.29)A	
Q.30)A	Q.31)A	Q.32)A	Q.33)A	Q.34)A	Q.35)A	Q.36)A	Q.37)A	Q.38)A	Q.39)A	Q.40)A	Q.41)A	Q.42)A	Q.43)A	
Q.44)A	Q.45)A	Q.46)A	Q.47)A	Q.48)A	Q.49)A	Q.50)A								

# TCET 2026 Test Series:

## Explanations:

### Technical

Q.1) Explanation:  
Multiple Choice Type Question: \*\* Explanation not Available \*\*

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# TCET 2026 Test Series:

## Answers And Explanations:

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Q.39) A

Explanation:

Multiple Choice Type Question: \*\* Explanation not Available \*\*

Q.40) A

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