

20 MCQs on Linked List

S No	Question	Correct Answer & Explanation
1.	What is a linked list in C? a) A linear data structure b) A non-linear data structure c) A sorting algorithm d) A searching algorithm	<i>a) A linear data structure</i>
2.	Which of the following is not a type of linked list? a) Singly linked list b) Doubly linked list c) Circular linked list d) Stack	<i>d) Stack</i>
3.	Which pointer in a linked list holds the address of the first node? a) head b) start c) root d) top	<i>a) head</i>
4.	What is the time complexity of searching for an element in a linked list? a) $O(1)$ b) $O(\log n)$ c) $O(n)$ d) $O(n^2)$	<i>c) $O(n)$</i>
5.	Which operation is used to insert a node at the beginning of a linked list? a) insertAtEnd b) insertAtBeginning c) insertAfter d) insertBefore	<i>b) insertAtBeginning</i>
6.	What does a NULL pointer signify in a linked list? a) End of the linked list b) Beginning of the linked list c) Middle of the linked list d) None of the above	<i>a) End of the linked list</i>
7.	Which operation is used to delete a node from the end of a linked list? a) deleteAtEnd b) deleteAtBeginning c) deleteAfter d) deleteBefore	<i>a) deleteAtEnd</i>
8.	Which of the following is true about a doubly linked list? a) It can be traversed only in one direction b) It cannot contain NULL pointers c) It contains pointers to both the next and previous nodes d) It is more memory-efficient than a singly linked list	<i>c) It contains pointers to both the next and previous nodes</i>
9.	What operation is used to insert a new node after a given node in a linked list? a) insertAtEnd b) insertAtBeginning	<i>c) insertAfter</i>

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	c) insertAfter d) insertBefore	
10.	What is the time complexity of inserting a node at the beginning of a linked list? a) $O(1)$ b) $O(\log n)$ c) $O(n)$ d) $O(n^2)$	a) $O(1)$
11.	Which of the following is not an advantage of linked lists? a) Dynamic size b) Memory utilization c) Random access d) Ease of insertion and deletion	c) Random access
12.	What operation is used to delete a node from the beginning of a linked list? a) deleteAtEnd b) deleteAtBeginning c) deleteAfter d) deleteBefore	b) deleteAtBeginning
13.	Which of the following operations can be performed on a circular linked list? a) Traversal from end to beginning b) Traversal from beginning to end c) Traversal in both directions d) None of the above	c) Traversal in both directions
14.	Which of the following operations can be performed in constant time in a singly linked list? a) Insertion at the end b) Deletion at the beginning c) Traversal from end to beginning d) Finding the middle element	b) Deletion at the beginning
15.	What is the time complexity of deleting a node from the end of a linked list? a) $O(1)$ b) $O(\log n)$ c) $O(n)$ d) $O(n^2)$	c) $O(n)$
16.	Which of the following statements is true about the memory allocation of linked lists? a) Memory is allocated sequentially b) Memory is allocated randomly c) Memory is allocated statically d) Memory is allocated dynamically	d) Memory is allocated dynamically
17.	What is the space complexity of a linked list? a) $O(1)$ b) $O(n)$ c) $O(\log n)$ d) $O(n^2)$	b) $O(n)$
18.	Which of the following operations requires traversal of the entire linked list? a) Insertion at the beginning b) Deletion at the end c) Finding the middle element d) All of the above	d) All of the above
19.	What is the time complexity of searching for an element in a sorted linked list? a) $O(1)$ b) $O(\log n)$ c) $O(n)$ d) $O(n^2)$	c) $O(n)$
20.	Which of the following operations is not possible in a singly linked list? a) Traversal from beginning to end b) Traversal from end to beginning c) Finding the middle element d) None of the above	b) Traversal from end to beginning