

2 Lecture - CS301

Important Mcqs

1. Which data structure is used to implement a list?

- a) Array
- b) Stack
- c) Queue
- d) Tree

Answer: a) Array

2. Which of the following is a disadvantage of array-based lists?

- a) Efficient random access to elements
- b) Dynamic resizing of the list
- c) Inefficient insertion and deletion operations
- d) No need to allocate memory in advance

Answer: c) Inefficient insertion and deletion operations

3. Which of the following is a disadvantage of linked-list based lists?

- a) Efficient random access to elements
- b) Dynamic resizing of the list
- c) Inefficient insertion and deletion operations
- d) No need to allocate memory in advance

Answer: a) Efficient random access to elements

4. Which of the following is true for an empty list?

- a) It has no elements
- b) It has one element
- c) It has multiple elements
- d) None of the above

Answer: a) It has no elements

5. Which operation adds an element at the end of an array-based list?

- a) push()
- b) pop()
- c) insert()
- d) append()

Answer: d) append()

6. Which operation adds an element at the beginning of a linked-list based list?

- a) push()
- b) pop()
- c) insert()
- d) append()

Answer: a) push()

7. Which operation removes the last element from an array-based list?

- a) push()

- b) pop()
- c) insert()
- d) append()

Answer: b) pop()

8. **Which operation removes the first element from a linked-list based list?**

- a) push()
- b) pop()
- c) insert()
- d) append()

Answer: b) pop()

9. **Which of the following is a common application of lists?**

- a) Implementing a queue
- b) Implementing a hash table
- c) Implementing a binary search tree
- d) Implementing a heap

Answer: a) Implementing a queue

10. **Which of the following is not a type of list?**

- a) Singly linked list
- b) Doubly linked list
- c) Circular linked list
- d) Heap linked list

Answer: d) Heap linked list