# 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