

13 Lecture - CS301

Important Mcqs

1. **What is the cost of search in computer science?**

- a. Amount of time, resources, and computational power required to search for a specific item in a data structure
- b. The amount of data in a data structure
- c. The size of the data structure
- d. The type of data structure used

Answer: a.

2. **Which of the following measures is a common measure of search cost?**

- a. Time complexity
- b. Space complexity
- c. Worst-case analysis
- d. All of the above

Answer: d.

3. **Which search algorithm is commonly used for searching a sorted array?**

- a. Binary search
- b. Linear search
- c. Depth-first search
- d. Breadth-first search

Answer: a.

4. **Which data structure is commonly used for implementing hash tables?**

- a. Linked list
- b. Queue
- c. Stack
- d. Array

Answer: a.

5. **What is the time complexity of binary search?**

- a. $O(1)$
- b. $O(\log n)$
- c. $O(n)$
- d. $O(n \log n)$

Answer: b.

6. Which of the following is a disadvantage of linear search?

- a. It has a time complexity of $O(1)$
- b. It is easy to implement
- c. It has a time complexity of $O(n)$
- d. It is efficient for large datasets

Answer: c.

7. Which of the following is a disadvantage of binary search?

- a. It can only be used with sorted arrays
- b. It has a time complexity of $O(n)$
- c. It is difficult to implement
- d. It is not efficient for large datasets

Answer: a.

8. Which data structure is commonly used for implementing binary search trees?

- a. Array
- b. Linked list
- c. Queue
- d. Stack

Answer: b.

9. What is the time complexity of searching a hash table with a good hash function?

- a. $O(1)$
- b. $O(\log n)$
- c. $O(n)$
- d. $O(n \log n)$

Answer: a.

10. Which of the following measures is not a common measure of search cost?

- a. Time efficiency
- b. Space efficiency
- c. Worst-case analysis
- d. Best-case analysis

Answer: d.