39 Lecture - CS301

Important Mcqs

- 1. What is the time complexity of binary search algorithm?
 - a) O(1)
 - b) O(n)
 - c) O(log n)
 - d) O(n^2)

Answer: c) O(log n)

- 2. In which type of array is binary search the most efficient?
 - a) Sorted array
 - b) Unsorted array
 - c) Randomly sorted array
 - d) None of the above

Answer: a) Sorted array

- 3. Binary search algorithm can be used for:
 - a) Array
 - b) Linked list
 - c) Both A and B
 - d) None of the above

Answer: a) Array

- 4. Binary search algorithm can be applied to:
 - a) Characters
 - b) Integers
 - c) Floats
 - d) All of the above

Answer: d) All of the above

- 5. Which of the following is not a step in binary search algorithm?
 - a) Check if the middle element is equal to the target element
 - b) If the target element is greater than the middle element, search the left half of the array
 - c) If the target element is less than the middle element, search the right half of the array
 - d) Return the index of the target element

Answer: d) Return the index of the target element

- 6. What is the worst-case time complexity of binary search algorithm?
 - a) O(1)
 - b) O(n)
 - c) O(log n)
 - d) O(n^2)

Answer: c) O(log n)

- 7. Which of the following is not a requirement for binary search algorithm to work?
 - a) The array must be sorted

	 b) The array must be in ascending order c) The array must be in descending order d) The array must be homogeneous Answer: c) The array must be in descending order
8.	What is the middle element in an array of size 10? a) 4 b) 5 c) 9 d) 10 Answer: b) 5
9.	How many elements are left in the array after the first iteration of binary search on an array of size 16? a) 8 b) 4 c) 2 d) 1 Answer: a) 8
10.	What is the index of the target element in the array [1, 3, 5, 7, 9] when using binary search to find 7? a) 2 b) 3 c) 4 d) 5 Answer: b) 3