36 Lecture - CS301

Important Mcqs

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

Answer: a) O(n)

- 2. Which of the following is not an asymptotic notation used for running time analysis?
 - a) Big O notation
 - b) Theta notation
 - c) Little O notation
 - d) Epsilon notation

Answer: d) Epsilon notation

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

Answer: b) O(log n)

- 4. Which of the following is a constant time complexity algorithm?
 - a) Bubble sort
 - b) Insertion sort
 - c) Quick sort
 - d) Counting sort

Answer: d) Counting sort

- 5. Which of the following is an example of an exponential time complexity algorithm?
 - a) Merge sort
 - b) Quick sort
 - c) Bubble sort
 - d) Traveling salesman problem

Answer: d) Traveling salesman problem

- 6. Which of the following is not a factor that can affect the running time of an algorithm?
 - a) Input size
 - b) Memory usage
 - c) Hardware configuration
 - d) Implementation details

Answer: b) Memory usage

- 7. What is the time complexity of a worst-case scenario for a sorting algorithm?
 - a) O(n)

- b) O(log n)
- c) O(n^2)
- d) O(1)

Answer: c) O(n^2)

- 8. What is the time complexity of a best-case scenario for a sorting algorithm?
 - a) O(n)
 - b) O(log n)
 - c) O(n^2)
 - d) O(1)

Answer: a) O(n)

- 9. Which of the following is an example of a logarithmic time complexity algorithm?
 - a) Merge sort
 - b) Quick sort
 - c) Binary search
 - d) Bubble sort

Answer: c) Binary search

- 10. Which of the following is an example of a quadratic time complexity algorithm?
 - a) Merge sort
 - b) Quick sort
 - c) Insertion sort
 - d) Heap sort

Answer: c) Insertion sort