44 Lecture - CS301

Important Mcqs

 What is the time complexity of selection so

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

Answer: c) O(n^2)

2. Which of the following is true about selection sort?

- a) It is an in-place sorting algorithm
- b) It is a stable sorting algorithm
- c) It is a divide-and-conquer sorting algorithm
- d) It is a comparison-based sorting algorithm

Answer: d) It is a comparison-based sorting algorithm

- 3. Which of the following is the best case time complexity of selection sort?
 - a) O(n)
 - b) O(n log n)
 - c) O(n^2)
 - d) O(2ⁿ)

Answer: c) O(n^2)

- 4. Which of the following data structures is commonly used to implement selection sort?
 - a) Array
 - b) Linked List
 - c) Stack
 - d) Queue

Answer: a) Array

- 5. Which of the following is the space complexity of selection sort?
 - a) O(n)
 - b) O(log n)
 - c) O(1)
 - d) O(n log n)

Answer: c) O(1)

- 6. Which of the following is the first step in selection sort?
 - a) Compare the first two elements
 - b) Find the smallest element in the array
 - c) Compare the last two elements
 - d) Swap the first two elements

Answer: b) Find the smallest element in the array

7. Which of the following is the worst case time complexity of selection sort?

a) O(n)

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

Answer: c) O(n^2)

- 8. Which of the following is the average case time complexity of selection sort?
 - a) O(n)
 - b) O(n log n)
 - c) O(n^2)
 - d) O(2ⁿ)

Answer: c) O(n^2)

- 9. Which of the following is the last step in selection sort?
 - a) Swap the last two elements
 - b) Swap the first two elements
 - c) Find the smallest element in the array
 - d) Compare the last two elements

Answer: a) Swap the last two elements

- 10. Which of the following is a disadvantage of selection sort?
 - a) It is a very slow algorithm
 - b) It is not stable
 - c) It requires additional memory space
 - d) It cannot handle large datasets

Answer: a) It is a very slow algorithm