

Multiple Choice Questions

What is the best case performance of the bubble sort algorithm?

- (A) $O(n^2)$
- (B) $O(2^n)$
- (C) $O(n)$
- (D) $O(n \log n)$

RIGHT ANSWER: (C)

How many comparisons will be made to sort the array $arr = \{1, 5, 3, 8, 2\}$ using counting sort?

- a) 5
- b) 7
- c) 9
- d) 0

RIGHT ANSWER: (D)

What is the auxiliary space requirement of counting sort?

- a) $O(1)$
- b) $O(n)$
- c) $O(\log n)$
- d) $O(n+k)$ $k = \text{range of input}$

RIGHT ANSWER: (D)

Which of the following is not in place sorting algorithm?

- a) merge sort
- b) quick sort
- c) heap sort
- d) insertion sort

RIGHT ANSWER: (A)

Which of the following sorting algorithms has the lowest worst-case complexity?

- (A) Merge Sort
- (B) Bubble Sort
- (C) Quick Sort
- (D) Selection Sort

RIGHT ANSWER: (B)