

1. What is the time complexity of the Bubble Sort algorithm in the worst case?
 - A. $O(n)$
 - B. $O(n \log n)$
 - C. $O(n^2)$
 - D. $O(2^n)$

2. What happens to the largest element in the array after the first complete iteration of Bubble Sort?
 - A. It moves to the first position
 - B. It remains in its original position
 - C. It moves to the last position
 - D. Its position is randomized
3. Which of the following scenarios can Bubble Sort handle efficiently?
 - A. Sorting very large datasets
 - B. Sorting nearly sorted datasets
 - C. Sorting datasets with a lot of duplicate values
 - D. Sorting datasets with complex custom compare functions
4. In the Bubble Sort algorithm, how many comparisons does the outer loop typically perform for an array of size 'n'?
 - A. n
 - B. $n-1$
 - C. n^2
 - D. $n/2$
5. For the given bubble sort algorithm:

If we want to sort the elements [5,56,3,65,2,1], what should be the value of blank?

```

def bubble_sort(elements):
    size = len(elements)

    for i in range((Blank)):
        swapped = False
        for j in range(size-1-i):
            if elements[j] > elements[j+1]:
                tmp = elements[j]
                elements[j] = elements[j+1]
                elements[j+1] = tmp
                swapped = True

        if not swapped:
            break

```

- A. size-1-i
- B. Size-1
- C. size
- D. 1