Quick Questions

1. **How many compares does insertion sort make on an input array that is *already sorted*?**

Constant	
Logarithmic	
Linear	X
Quadratic	

2. **What is a stable sorting algorithm?** Stable sorting algorithms preserve the existing relative order of elements when comparing equal keys – i.e. if two objects with equal keys appear in the same order in sorted output as they appear in the input array to be sorted.

3. **What is an external sorting algorithm?**

   A. Algorithm that uses tape or disk during the sort
   B. Algorithm that uses main memory during the sort
   C. Algorithm that involves swapping
   D. Algorithm that are considered 'in place'

   Ans: A

4. **Identify 6 ways of classifying sorting algorithms?**

1.	Comparison vs non comparison
2.	Time complexity
3.	Space complexity
4.	Stability
5.	Internal vs external
6.	Recursive vs non-recursive

<u>Array of size 10:</u>

Selection Sort: 0ms

Insertion Sort: 0ms

Bogo Sort: 5ms