

**Question - 1**
Sorting with Firstname & Lastname

SCORE: 5 points

Suppose there is a class Person, containing the First Name and Last Name. If you want to implement a sort method to sort a list of Person according to their First Name and Last Name (First based on the first character of Last Name and then based on the first character of First Name), which sort method would be more suitable?

- ☐ Quick Sort
- ☒ Merge Sort
- ☐ Shell Sort
- ☐ Heap Sort

Question - 2
Sorting

SCORE: 5 points

The time complexity required to merge two sorted arrays of size m and n is

- ☐ $O(m)$
- ☐ $O(n)$
- ☒ $O(m+n)$
- ☐ $O(mn)$

Question - 3
Sorting

SCORE: 5 points

Which sorting method runs faster for an array with all keys identical?

- ☐ Selection
- ☒ Insertion
- ☐ Merge
- ☐ Shell

Question - 4

SCORE: 45 points



Sorting

Sorting input strings according to following rules:

1. From A - Z in dictionary order ignoring case , such as Type -> epTy
2. Different cases of same character remains the original order, such as BabA -> aABb
3. Characters that are not English alphabet, remain the original place, such as By?e -> Be?y