

20SCS2050 - Quiz 13(5 Points)

1. After merging left = [10, 40, 45] with right = [1, 5, 12]

(1 Point)

1 element still needs to be copied from the left

2 elements still need to be copied from the left

1 element still needs to be copied from the right

2 elements still need to be copied from the right

2. Sorting [45, 12, 40, 10, 1, 5] using merge sort will require

(1 Point)

3 merges

4 merges

5 merges

6 merges

3. In terms of complexity, the merge procedure in the merge sort algorithm is

(1 Point)

logarithmic or $O(\log n)$

linear or $O(n)$

$O(n \log n)$

quadratic or $O(n^2)$

4. If you have a collection of size $n = 1024$, how many levels of indirection merge sort will create to sort the collection?

(1 Point)

3

5

10

100

5.Sort the algorithms in terms of complexity (worse to best) when sorting [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] in ascending order

(1 Point)

selection sort, insertion sort, and merge sort

selection sort, merge sort, and insertion sort

insertion sort, selection sort, and merge sort

insertion sort, merge sort, and selection sort