

## COP 5407: Spring 2019: QUIZ 2

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**Panther ID (No name please):**

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Mark all that apply. More than one may apply.

1. The worst-case time complexity of MERGESORT is:
  - (a)  $O(n)$
  - (b)  $O(n \log n)$
  - (c)  $O(n^2)$
  - (d)  $\Omega(n)$
  - (e)  $\Omega(n \log n)$
  - (f)  $\Omega(n^2)$
  
2. What is the fastest sorting algorithm if the input is already in sorted order?
  - (a) MERGESORT
  - (b) SELECTIONSORT
  - (c) QUICKSORT
  - (d) INSERTIONSORT
  - (e) HEAPSORT
  
3. Which sorting algorithms are **stable**?
  - (a) MERGESORT
  - (b) SELECTIONSORT
  - (c) QUICKSORT
  - (d) INSERTIONSORT
  - (e) HEAPSORT