

CS140b Spring 96 – Quiz 5
Prof. Frank Vahid

Name: _____ Student number: _____

1. (3 pt.) Give the time complexities for the following:

- (a) Merging two sorted lists:
- (b) Quicksort (average and worst case):
- (c) Mergesort (average and worst case):
- (d) Heapsort (average and worst case):
- (e) Heapsort using a binomial heap:

2. (7 pt.) Concisely describe/define the following:

- P:

- NP:

- NP-complete:

- The Knapsack problem:

- The 0-1 Knapsack problem:

3. (2 pt.) List 3 classes of algorithms.