

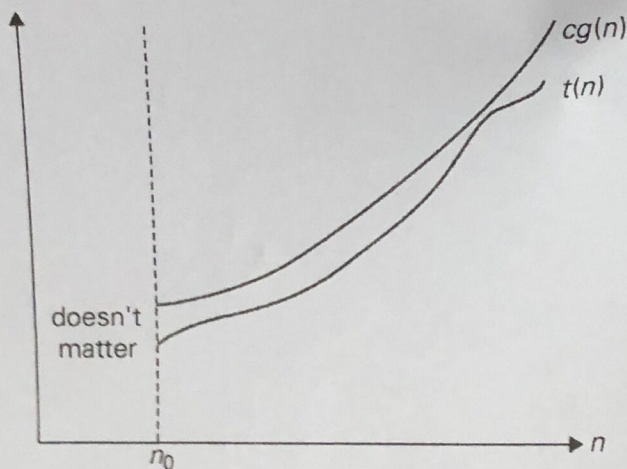
Student No:

07.11.2018

Name- Surname:

ALGORITHM ANALYSIS MIDTERM EXAM

- 1) What is the "worst case analysis" of the function $f(n) = 100n + 5$ for different values of n ?
- 2) Give 3 statements about big-oh notation and prove these statements by using the graphic below.



Big-oh notation: $t(n) \in O(g(n))$.

3) Sort the numbers in the below list with

a) merge sort

b) quick sort.

What are the worst cases of these two sorting algorithms with this number list?

2-5-9-8-15-6-3-10

1. Question: 40 pts, 2. Question: 30 pts, 3. Question: 40 pts.

You have 60 minutes. Good Luck.

Assoc. Prof. Dr. Ruya SAMLI