

Student No:

Name – Surname:

25.12.2018

**ALGORITHM ANALYSIS FINAL EXAM**

1) (30 pts) Solve the problem below with two different techniques and compare these techniques according to their worst cases." You have 10, 9, 5 and 1 cent coins and you want to pay 37 cents.

2) (40 pts)  $A = [5, 7, 2, 4, 6]$

Find the minimum element of the array above by using

- a) a divide-and-conquer algorithm.
- b) a transform-and-conquer algorithm.

3) (30 pts) What is an algorithm? Explain your answer with a figure that contains the concepts, algorithm, problem, computer, input and output.

You have 60 minutes. Good Luck.

Assoc. Prof. Dr. Ruya SAMLI