

Name	Signature	Student Id Nr	Points

581305-6 Computer Organization I, miniexam 1, 11.11.2019 (12 p)

Write your answer on this exam paper in the space given. Please notice, that the exam paper is 2-sided.

a) [3 p] How does the processor execute the machine instructions? Into which parts is that execution of instructions divided to, and what do those parts do?

b) [3 p] Ordinary programs can only reference their own memory areas (code and data). How is this implemented in the example computer (ttk-91) and how does the implementation effect the execution of instructions in the processor?

c) [3 p] Parts of the operating system must be able to reference all data in memory, and perform tasks that are not allowed to ordinary programs.

How is this implemented in the example computer (ttk-91) and how does the implementation effect the execution of instructions in the processor?

d) [3 p] Parts of the operating system must be able to execute whenever needed.

How is this implemented in the example computer (ttk-91) and how does the implementation effect the execution of instructions in the processor?

Mention three types, different from each other, of reasons to give operating system the turn to execute in the middle of executing some ordinary program. Give an example for each type.