ECAM
BRUSSELS ENGINEERING SCHOOL

Winter 2019
Sébastien Combéfis

SS201μ Introduction to the Internal Design of Operating Systems

Quizz 1: Operating system services

This assessment evaluates the following competencies:

- *OS101 – Understand and define what is an operating system* *(+1)*
- *OS102 – Explain mechanisms used by the operating system to abstract the CPU, the memory and the input/output* *(+1)*
- *OS121 – Understand how the user mode interacts with the kernel mode and explain the system call mechanism* *(+1)*

Three affirmations are given for each assessed competency. For each of them, you have to decide whether it is true or false. To get a star for the competency, you must have the correct answer for the three affirmations.

OS101	**True**	**False**
An operating system directly provides an abstraction of the hardware of a computing system to its users.	☐	☐
It is impossible to have a computing system without any operating systems on which applications can be run.	☐	☐
An operating system provides services to the applications to allow them to access the hardware.	☐	☐

OS102	**True**	**False**
The main memory of a computing system is abstracted with processes by the operating system.	☐	☐
The physical memory of a computing system can be divided into pages.	☐	☐
A process may be on disk.	☐	☐

OS121	**True**	**False**
A system call is used to execute any user code in kernel mode.	☐	☐
A system program is completely executed in kernel mode.	☐	☐
A user application can execute a system call through the system call interface that makes the transition between the user and the kernel mode.	☐	☐