Advanced Operating Systems and Virtualization
June 28th, 2018

Name: _____ **Surname**: _____ **Student ID**: _____

Remember to write your correct personal data on this sheet, and use it as a folder to wrap the exposition. If you think a question is ambiguous, write your interpretation and answer accordingly.

You are not allowed to use any note or digital device. If you are found copying or consulting notes, you will not pass the written test.

Question 1
Describe the hardware and software architecture used for interrupt delivery and management on modern Linux/x86 systems. Explain how Inter-Processor Interrupts are explicitly handled in this context, emphasizing on the differences with respect to standard interrupt management.

Question 2
Describe the methodologies which allow to enhance the security of modern operating systems.

Question 3
Describe the false cache sharing problem, and discuss how the Linux kernel tries to mitigate it.