

## Advanced Linux System Administration

### Final Exam (Theory), 2015

**Question 1.(1p).** For a Linux file system such as the one used in this course, describe the kind of content of each directory listed below:

/dev  
/etc  
/mnt  
/root  
/sbin  
/proc  
/home

**Question 2.(1p).** One of the mechanisms available for remote access to an X Server is the host authorization (xhost) What are its main security problems? What is the most usual mechanism used nowadays for remote access?

**Question 3.(1p).** Describe the main differences between the two O.S. bootloaders seen in this course (structure, operation mode, security, ...).

**Question 4.(1p).** An unauthorized user has performed changes to a Debian repository, modifying the “nedit” package. What will happen if you download it and try to install it?

**Question 5.(1p).** Describe the methods you know to avoid password cracking mechanisms based on brute force.

**Question 6.(1p).** What is an incremental backup? Why do you think this kind of backup is used?

**Question 7.(1p).** In a Linux system, what kind of hardware resources can be managed? Describe at least one management mechanism/command for each one of them.

**Question 8. (1p).** Describe the log rotation mechanism (utility, process, tools).

**Question 9. (1p).** Describe the utility of the DHCP service and how to configure a system to make use of it.

**Question 10. (1p).** We want to send an ethernet package from the network unican.es to the host user12.ece.stanford.edu. How can we figure out the MAC address of the destination host? And its IP address?