

# Advanced Operating Systems and Networks

## Theory Exam. February, 2018

**Surname, Name:**

**Group:**

**Rules:**

1. No material can be consulted.
2. Exam duration is a maximum of 1 hour.

**Question 1 (1 point).** Briefly describe the mechanism used in IPv6 to add options to IP datagrams.

**Question 2 (1 point).** Briefly describe what is a path vector routing algorithm.

**Question 3 (1 point).** Write the name, type and data for the following DNS records:

- A. Set web.ucm.es as an alternate name for the domain name www.ucm.es
- B. Associate the domain name www.ucm.es to the IP 147.96.1.2
- C. Associate the IP 147.96.1.2 to the domain name www.ucm.es
- D. Set mail.ucm.es as the mail server of ucm.es. domain

**Question 4 (1 point).** Describe the purpose of the umask. Is it a property of the user, the process or the system? What is the effect of umask 022?

**Question 5 (1 point).** Briefly describe the alternatives to synchronize I/O operations of a process over multiple descriptors.