Sistemas de Computação Móvel e Ubíqua
2017/2018

Second test: 9/06/2018   Duration: 1:30h
Closed book

1. Describe the main problems faced by wireless links.

2. In wireless communication, in order to allow several devices to communicate without interference, it is necessary to multiplex the transmission medium. In this context describe the technique known as Code Division Multiple Access (CDMA).

3. Explain why CSMA/CD is not used in Wireless Networks?

4. Describe the main factors to consider when choosing a wireless network protocol.

5. *"Data caching* is a central technique in mobile applications systems".
   a. Comment the above statement.
   b. What are the main problems that cache management schemes in mobile environments needs to address.

6. In mobile computing, the information we are interested in can be obtained through two modes: on-demand and publish-subscribe.
   a. Explain each one of them (in the mobile computing context).
   b. Give examples of use (applications) for both of them.

7. A mobile operating system (mobile OS) is specifically designed to run on mobile devices such as mobile phones, smartphones, tablet computers and other handheld devices. Besides the features common to other OS, describe the ones specific of mobile OS.

8. What are the key features that make Fog computing a good choice for the IoT system designers?