

## **T-110.5116 Computer Networks II - Advanced Features**

Exam 04.09.2012

No written material allowed

Each question is worth 2 points

Try to keep your answers brief and to the point.

Justify your answers.

Duration 3h

Teacher: Matti Siekkinen

1. Explain why Delay Tolerant networking solutions are sometimes necessary and traditional Internet protocols (TCP/IP) don't work well.
2. What does "identity-locator split" mean in the context of Internet protocols? Is it a positive or negative phenomenon and why?
3. What is content centric networking and which advantages does it offer compared to current IP networking?
4. Is TCP a fair protocol? Justify your answer.
5. Explain which problem LEDBAT solves and how (just basic principle).
6. Is it currently possible to guarantee a certain quality of service for Internet applications? Justify your answer.
7. What happens if you use your smartphone to communicate (e.g. file download) simultaneously over the Bluetooth and the Wi-Fi (802.11) interfaces and why?
8. What is the difference between Continuously Active Mode (CAM) and Power Saving Mode (PSM) in Wi-Fi and how is it related to energy consumption?
9. What is topology discovery and why is it done?
10. Can we use standard TCP (e.g. Reno) implementations in data center networks? Justify your answer.