T-110.5116 Computer Networks II - Advanced Features

Exam 16.12.2010
No written material allowed
Duration 3h
Each question is worth 2 points
Teacher: Matti Siekkinen

1. How does epidemic routing work and what are its limitations?

2. What are the benefits that Host Identity Protocol can provide?

3. What is a zFilter and how is it used in PSIRP for delivering data? Explain just the basic operation without enhancements.

4. What is the problem of standard TCP (e.g. Reno) with high-speed networks? Give an example of an approach to solve it.

5. What are the advantages and drawbacks of SCTP compared to TCP?

6. How can application level techniques be used to improve QoS in multimedia streaming?

7. Explain what is the TCP incast problem in data center networks and describe solutions to it.

8. Explain briefly how the power saving feature in 802.11 standard operates and how it helps to save energy.

9. What are network black holes and how can they be diagnosed and located? Just explain the core idea without going into details.

10. Why is clustering used in wireless sensor networks?