T-110.5116 Computer Networks II - Advanced Features

Exam 24.08.2011
No written material allowed
Each question is worth 2 points
Try to keep your answers brief and to the point.
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. Which benefits can Host Identity Protocol provide?

3. What is information centric networking and which advantages does it offer compared to current IP networking?

4. Is TCP a fair protocol?

5. Compare SCTP to UDP and TCP.

6. Is it currently possible to guarantee a certain quality of service for Internet applications? Justify your answer.

7. Explain how Content Distribution Networks (CDN) work and how they can improve quality of service.

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 network tomography and why is it useful?

10. Describe at least one performance issue that standard TCP (Reno) might suffer from specifically in data center networks and explain why.