## T-86.5170

## **Service-Oriented Architecture and Software Engineering Exam 8.3.2011**

## Write on every paper:

- T-86.5170 Service-Oriented Architecture and Software Engineering
- Family name, First names
- Student ID
- Department
- Signature
- 1. Shortly (1-2 sentences) explain each term. (6p)
  - a. WS-I
  - b. Separation of concerns
  - c. Service contract vs. service interface
  - d. Orchestration
  - e. REST
  - f. Service granularity
- 2. List and describe six (6) SOA service design principles. (6p)
- 3.
- a. Explain the four horizontal layers in the S3 SOA Reference Architecture. (4p)
- b. What are Web Service Extensions (WS-\*) and why are they needed? (2p)

4.

- a. Describe the different actors and their roles in an SOA architecture model. (3p)
- b. Describe the concepts of SOA and Software as a Service (SaaS). How do they differ and how do they fit together? (3 p)
- 5. Essay question (6p)
  Write a short essay (1-2 pages) about **one** of the following topics:
- SOA and Cloud Computing.
   Explain what kind of issues need to be addressed in combining SOA and Cloud Computing. Is Cloud Computing useful for SOA? Why or why not?
- SOA Governance.
   What is SOA Governance about and what is it good for? What kind of models and viewpoints are typically identified in relation to SOA Governance?
- SOA Security.
   Explain what kind of issues are involved in SOA Security. Are specific SOA Security approaches needed compared to traditional security approaches? Why or why not?