

T-76.4602 Software Development Methods Examination, 7th March, 2013

Write the following information in each paper you return: name, student number, course code and name, date, signature.

Students are not allowed to use any notes or materials in the exam.

The main guideline: Explain and reason your answers clearly and do not use just a list of bullet points.

Important: Answer only 3 questions (out of the 5 numbered questions below).

Each question is worth 10 points i.e. the total number of points from the exam is 30.

1. What does a cultural change in requirements engineering (RE) mean and how can RE practices, testing, and (E)ATDD¹ support the cultural change?
2. Architecturally significant requirements and the QUPER model. Cover in your answer the following aspects
 - Explain what architecturally significant requirements mean and give examples.
 - Explain the quality performance (QUPER) model: Explain the key QUPER concepts and give concrete examples of the concepts. Explain how the QUPER model operates on these concepts.
 - Explain how the QUPER model supports the definition, design, and testing of architecturally significant requirements.
3. How can agile software development be combined with requirements engineering and software architecture design?
4. How do domain modeling and software architecture design relate and which practices and methods can be applied during these activities? In software architecture design, focus on functionality-based architecture design.
5. Teamwork.

Eisenhardt, Kahwajy and Bourgeois (1997)² have discovered six tactics that successful management teams apply for managing conflicts. Using your knowledge about the six tactics, answer a), b) and c):

 - a) What are the six tactics for managing conflicts?
 - b) What role do conflicts have in software projects?
 - c) How can each of the six tactics help the modeling work of software development teams?
 - d) How did your teamwork succeed during the assignments and what was your own role in the team?

¹ EATDD: Executable Acceptance Test Driven Development
ATDD: Acceptance Test Driven Development

² Eisenhardt K. M., Kahwajy J. L., and Bourgeois III L.J. (1997) "How Management Teams Can Have a Good Fight", *Harvard Business Review*, Vol 4, pp. 77-85.