

# ETS170 - Exam Problems 2

Group C

November 2014

## 1 Lau 5, Lau 7

### 1.1 Problem 1

**Proposition** Requirement specification tools don't necessarily simplify the requirement engineering process.

**Reason** Requirement specification tools are often not cost-effective, they force you to adapt to how the tool is made and are often expensive without providing much of an advantage compared to simplifying requirements.

**Correct Answer** A

**Motivation** Laussen describes that he has visited several organizations and most of them don't find tools cost-effective. He describes an organization that instead worked on writing shorter specifications and changed the way they expressed their requirements instead.

**Reference** Lau 7.10 Tool Support

**Learning Objective** 1.1.3 1.1.5

**Main Responsible** Richard Simko

## 2 Lau 6

### 2.1 Problem 1

**Proposition** Heuristic evaluation is generally a good alternative when wanting to find problems in the design of the product.

**Reason** Since usability experts have prior experience of what users find as usability problems, heuristic evaluation can help a company identify problems which programmers may not see.

**Correct Answer** D

**Motivation** Code reviewing is much more capable of finding real errors compared to heuristic evaluation which may find many actual usability problems, but may just as well find as many false ones. The reason for this is that programmers probably understands the computer better than a usability expert understand the users. Thus it cannot be said to be a good alternative, although this of course may depend on the constraints, such as time and budget. However it is true that usability experts have prior experience and probably will identify a lot of problems programmers may miss, the question is whether it's the right ones.

**Reference** Lau 6.6.5 Usability Factors

**Learning Objective** 1.1.1 1.1.31

**Main Responsible** Johan Malmgren

## 2.2 Problem 2

**Proposition** Metric measurement corresponding to quality requirement are often hard for the supplier to select. Two ways to circumvent these implications regarding metric measurement of quality are to use open metric and/or open target.

**Reason** Open target and open metric let the supplier specify a part of the quality requirement.

**Correct Answer** A

**Motivation** In open target the customer let the supplier decide e.g what response time a system shall have specified by what the supplier actually can deliver. In open metric the customer does not simply know how to put a value or a metric unit on some kind of quality requirement and therefore lets the supplier find that.

**Reference** Lau 6.3 Open metric and open target.

**Learning Objective** 1.1.1 1.1.2 1.1.3

**Main Responsible** Alexander Löfqvist

## 3 Lau 9, INSP

### 3.1 Problem 1

**Proposition** The CRUD-matrix is used to discover missing requirements in a requirements specification.

**Reason** A CRUD-matrix shows the links between entities and tasks. Each link represents an operation that is made on the entity in the task.

**Correct Answer B**

**Motivation** Both the reasoning and proposition is true but CRUD helps in finding missing requirements by summarizing all the operations in each column too see if an entity is missing an operation. If so then a new requirement probably will need to be determined to fix the missing operation. The reasoning only explains how a CRUD-matrix is built not how it helps the analyzer determine that a requirement is missing.

**Reference** Lau Chapter 9: 386-388

**Learning Objective** 1.1.1 1.1.3

**Main Responsible** Nicklas Johansson

## 3.2 Problem 2

**Proposition** During risk assessment the customer and developer initially work together.

**Reason** This is because a requirement that is risky to the customer is probably also high risk to the developer.

**Correct Answer E**

**Motivation** The high risk factors differ between the customer and developer. For a customer the high risk requirements are those where the customer doesn't get what he or she wants even when what is specified is fulfilled. For the developers a high risk requirement is one they may not be able to implement at a reasonable cost.

**Reference** Lau Chapter 9: 392

**Learning Objective** 1.1.1 1.1.3

**Main Responsible** Fredrik Lindberg

## 4 MDRE+PRIO+RP

### 4.1 Problem 1: Release Planning

**Proposition** A Cost-Value diagram can help with selecting requirements for a release.

**Reason** By defining the golden grains in the "golden grain ratio" you can optimise the value of the release.

**Correct Answer A**

**Motivation** The Cost-Value diagram shows what requirements give a high enough value for their cost. This is defined as a alfa requirement. Having a large amount of alfa requirements compared to other requirements gives a good "golden grain ratio". The difficulty lies in doing the correct estimations of cost and value.

**Reference** 13.3.1 Process Quality in MDRE

**Learning Objective** 1.1.3 1.1.4

**Main Responsible** Jakob Svemar

## 4.2 Problem 2: Prioritization

**Proposition** Combining different prioritization techniques can be advantegous in terms of efficiency.

**Reason** By combining the two techniques 'Analytical Hierarchy Process' (AHP) and the '100-Dollar Test', the requirements can first be prioritized by the easy (less sophisticated) technique, and only the requirements that need more attention are prioritized by the more complex (sophisticated) technique, thus decreasing the effort.

**Correct Answer** C (the proposition is true, the reason is false)

**Motivation** It is true that one can achieve both higher efficiency and make the process of prioritization easier by combining different prioritization techniques. This is preferreably done by first using a less sophisticated (easy) technique, such as Numerical Assignment (Grouping), where the requirements are prioritized according to for example three groups (that the stakeholders can easily relate to): critical, standard and optional. The requirements that need more attention can then in turn be prioritized using a more sophisticated method such as AHP or the 100-Dollar Test. The proposition is therefore true. However, as both AHP and the 100-Dollar Test are (very) sophisticated techniques, as they for example involve eliciting ratios between the requirements, there is little to gain by combining these techniques – neither of them can probably be considered 'easy' sophistication-wise anyway. The reason is therefore false.

**Reference** PRIO: 4.4.6, 4.4.7

**Learning Objective** 1.1.3, 1.2.5

**Main Responsible** Christoffer Lauri

## 5 AGRE+INTDEP

### 5.1 Problem 1

**Proposition** Projects with agile development tend to see a lot of changes in requirements all throughout the process.

**Reason** Due to the iterative process of agile development and the fact that the customer is involved to a high degree, the customer is given many opportunities to change his mind on requirements.

**Correct Answer** D

**Motivation** While the agile development process usually allows for a customer to request modifications at many points during development, the study in [AGRE] shows that the availability of the customer gives the developers enough information to iron out any uncertainties early on and for that reason larger changes are rare later on in the process.

**Reference** AGRE p65

**Learning Objective** 1.1.3, 1.1.7

**Main Responsible** Christian Tenggren