ETS170 - Exam Problems 1

Group C

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1 Lau 1

1.1 Problem 1: Quality Requirements

Proposition Quality requirements often occupy a large part of the requirements specification.

Reason Quality requirements are considered very important and many problems in the final product are often quality issues.

Correct Answer D

Motivation It is true that quality requirements are important for the final product but they are also very hard to specify for the analysts. This results in that the quality requirements are a rather small part of the total requirements specification for the product.

Reference Lau Chapter 1: 19.

Learning Objective 1.1.1, 1.1.2

Main Responsible Nicklas Johansson

1.2 Problem 2: Tracing

Proposition A part of the validation process is to check that all parts of the program is required by tracing backwards from the program to the requirements.

Reason Tracing functionality back to requirements reduces the time spent on wasteful implementation.

Correct Answer D

Motivation Backwards tracing from the program to the requirements is indeed a good way for developers to not waste time on unnecessary implementations. But it is only a good way to save resources, not an actual part of the validation process.

Reference Lau Chapter 1: 6

Learning Objective 1.1.1, 1.1.3

Main Responsible Fredrik Lindberg

2 Lau 2

2.1 Problem 3: Data dictionaries

Proposition If data dictionaries are used as requirements there are no use for data models.

Reason Data dictionaries specifies all the details and the special cases that may occur when data is handled inside and outside of the product and therefore data models are often unnecessary.

Correct Answer E

Motivation There are different ways to use data dictionaries as requirements, and one way is actually to use the data directory as an explanation of a data model that already is a requirement. There are though ways to use data directories as requirements there a data model is not necessary but may be included to give the reader an overview. Conclusion is that data directories work good with a combination with data models.

Reference Lau Chapter 2: 56-59.

Learning Objective 1.1.1, 1.1.3

Main Responsible Alexander Löfqvist

2.2 Problem 4: Data expressions

Proposition Data expressions are a simple way of describing specific parts of the data model.

Reason Data expressions excel at describing data sequences and are useful for both experts and normal users.

Correct Answer A

Motivation When using data expressions for the entire model a lot of overview is lost. Instead one should use them for describing parts of the model in an abstract way, which is useful when talking with a customer or if the design is not yet decided upon.

Reference Lau Chapter 2: 60, 63-64.

Learning Objective 1.1.1, 1.1.3, 1.2.1

Main Responsible Jakob Svemar

3 Lau 3,4

3.1 Problem 5 : Collaboration diagram

Proposition Collaboration diagrams should be used to describe trivial functions of the system.

Reason Since a developer may lose his/her overview of the program logic when using collaboration diagrams, they should describe trivial functions.

Correct Answer E

Motivation This is a bit of a trick question, since it is true that a developer may lose his/her overview of the program logic when using collaboration diagrams. However, this is not the main reason for only using it for trivial functions. On the contrary, there is no point for using it for trivial functions at all since this will just be time consuming and the developer can be said to have enough domain knowledge (in most cases) to implement the trivial function either way. This is also true not only for the collaboration diagram, but also when specifying requirements using different techniques. Thus the student does need to know what a collaboration diagram per definition is, but rather have a basic understanding of that trivial requirements/functions is not that important in a system. However knowing what it is and when to use it is of course advantageous to answer the question.

Reference Lau Chapter 5: 188-189.

Learning Objective 1.1.1, 1.1.3, 1.2.1, 1.2.3

Main Responsible Johan Malmgren

3.2 Problem 6: Screens

Proposition Using screens as requirements for a COTS-based system is advantegous.

Reason Experience has shown a higher user acceptance of the product when screens has been part of the requirements, in for example a two-step requirements approach.

Correct Answer D

Motivation If a COTS-based system is to be chosen, the screens already exists in the product, thus screens as requirements are meaningless. If extensions are to be developed for a COTS-based system, it is still not recommended to use screens as requirements, as an economic solution requires that the design is adjusted to what the system can easily do, and the system has not yet been chosen, only the requirements are set up. The proposition is therefore false. The reason in itself is however true (Lau:3, page 90).

Reference Lau:3, page 33, 88, 90.

Learning Objective 1.1.1, 1.1.3, 1.2.1, 1.2.3

Main Responsible Christoffer Lauri

4 Lau 8

4.1 Problem 7: QFD Matrix

Proposition A QFD Matrix will provide a complete cost-benefit analysis.

Reason Since the QFD Matrix consists of a summary of each function's cost and its value, it can be used to analyze the costs and benefits of the system.

Correct Answer D

Motivation The QFD Matrix does contain the measured costs and benefits of the system, however, in order to provide a correct analysis one must be more detailed. The QFD Matrix is also based on having the correct business goals in order for it to be accurate. These are of course not well-defined but rather up to the person creating the requirement specification to determine. One might say that the QFD Matrix is a cost-benefit analysis using values applied to only soft factors.

Reference Lau: 360-363 (About Cost-Benefit Analysis and what it is), 366-369 (About QFD and the issues it has)

Learning Objective 1.1.4, 1.1.5, 1.3.5

Main Responsible Richard Simko

4.2 Problem 8: Focus Groups

Proposition Focus groups can help make sure that all stakeholders get something they want from the product.

Reason During the focus group, representatives from several stakeholders help decide on what requirements the product should meet.

Correct Answer C

Motivation During a focus group, the analyst will get an overview of what issues and improvements upon the existing system are the most important for each participating stakeholder group. No actual requirements are decided upon during the meeting though, as the analyst will decide what issues to work with first when the meeting is over.

Reference Lau:8, page 343, 352-354

Learning Objective 1.1.3, 1.2.1

Main Responsible Christian Tenggren