

Group D

2015-12-08

7 questions

+ very many good questions

- (1) A standardized protocol (e.g. https) does describe legal message sequences and error situations. The answer is still correct though, since a standard specification albeit improving completeness (since many people are involved in specifying and reviewing it) still often have a number of optionals and room for interpretation that need to be covered and detailed when requiring a standard to be supported.

[Lau:5,7] 1 problem

Bonus:5

Problem: Protocol in a technical interface

Proposition: When defining the protocol of a technical interface it is of great importance to choose a standardized protocol.

Reason: Using a standardization (e.g. TCP/IP) ensures that all parts needed in the protocol are covered.

Correct answer: E (both the reason and the proposition are false)

Motivation: In this problem the protocol explained in both proposition and reason are of a different kind than the protocol in a technical interface. The example, TCP/IP is a network protocol that is a standard. In a technical interface between a product and an external product the protocol is used to define what kind of message sequences that are allowed (legal) and how error situations are handled. This can be described in a state diagram or a sequence diagram or with the help of the Specification and Description Language (SDL), which have both a graphical notation and a corresponding formal text description.

Reference: Lau5, p.215-216

Learning objective: 1,3

Main responsible: Bernt Christensen

A standardized protocol (e.g. https) does describe legal message sequences and error situations. The answer is still correct though, since a standard specification albeit improving completeness (since many people are involved in specifying and reviewing it) still often have a number of optionals and room for interpretation that need to be covered and detailed when requiring a standard to be supported.

[Lau:6, QUPER] 2 problems

Problem: Supporting Roadmapping of Quality Requirement (QUPER)

Proposition: A breakpoint in the QUPER model represents the relation between quality and benefit. The utility breakpoint is used to mark the shift from useful to competitive quality.

Reason: The benefit level and quality level are getting higher after passing the utility breakpoint. A product becomes more useful and have more potential market value.

Correct answer: D (The proposition is false, but the reason is a true statement)

Motivation: The proposition is false as the utility breakpoint in QUPER is not used to mark the shift from useful to competitive. The utility breakpoint is instead used to mark the border between useless and useful quality. After passing the utility breakpoint a product becomes accepted on the market and users recognise its value thus the reason is a true statement.

Reference: QUPER S.43

Learning objective: 1,3

Main responsible: Chi Ching Lam

Problem: Specifying Quality Requirements on product level

Proposition: You should always specify accepted values for all product functions, e.g response time, throughput, etc. (Such as 'the system shall be able to handle reports in under 10 seconds')

Reason: If the response times are not explicitly stated, we might have to accept a system with a one-hour response time for a specific function.

Correct answer: A (Both are true and the reason answers the proposition typ)

Motivation: This is true, but for big systems with lots of functions, it is hard to specify this for each of the functions - A solution to this is to specify response times for groups of functions. an example:

"When moving to the next field, typing must be possible within 0.2 seconds. When switching to the next screen, typing must be possible within 1.3s. ..."

Reference: [Lau6], pp. 239, 245-246

Learning objective: 1, 3, 4

Main responsible: Christoffer Toft

[Lau:9, INSP] 2 problems

Problem: Risk Assessment

Proposition: It is crucial that developers and customer work together when identifying risk areas in a requirements specification.

Reason: Competence from both developers and customers is needed to complete a risk assessment.

Correct answer: D (The proposition is false, but the reason is a true statement.)

Motivation: A requirement of high risk for the customers does not necessarily need to have a high risk for the developers. Because of this it is better to keep them separated when doing the initial risk assessment. A high risk for the customer is usually that he does not get what he need and a high risk for the developer is usually that the price of implementing a requirement could be too high.

Reference: Lau9, p.392

Learning objective: 1,3,4

Main responsible: Carl Larsson Danell

Problem: Quality criteria for a specification

Proposition: A complete requirement specification contains specific requirements for all of the customers expectations.

Reason:The supplier must not only meet the stated requirement specification, but also the expectations the customer has on the product.

Correct answer: D (The proposition is false but the reason is true)

Motivation: The proposition is false, It is impossible to state all the requirements of a system, many of the customers expectations would result in trivial requirements and the specification would be impossible to comprehend. A complete requirement specification contains all non-trivial requirements. The reason is true, the supplier must meet reasonable expectations the customer might have in order to fulfill the contract.

Reference: Lau: Chapter 9 pages 374, 376

Learning objective: 1,4,5

Main responsible: Sarah Woodhouse

[MDRE+PRIO+RP] 2 problems

Problem: The Analytic Hierarchy Process (AHP)

Proposition: The Analytic Hierarchy Process (AHP) is a recommended prioritization technique for large numbers of requirements.

Reason: In AHP, all requirements are compared pairwise to determine which has higher priority.

Correct answer: D (the proposition is false, but the reason is a true statement)

Motivation: The total number of comparisons to perform increases dramatically as the number of requirements increases, hence it's not recommended for large requirement specifications. It's too time consuming.

Reference: Compendium article "Requirements Prioritization", p.75 section 4.4.1

Learning objective: 1, 3, 4

Main responsible: Dennis Samuelsson

Problem: Prioritization technique

Proposition: When dealing with prioritization, a numerical scale is considered more complex to apply than a ratio scale.

Reason: When using a numerical scale we need to compare all requirements against each other to determine the correct relative priorities.

Correct answer: E (both the reason and the proposition are false)

Motivation: When dealing with a ratio scale we need to compare all requirements to each and everyone of the other requirements. In a numerical approach we instead group the requirements which means we do not need to compare all requirements to each and everyone of the other requirements. The ratio scale is considered more complex than the numerical scale.

Reference: Compendium article "Requirements Prioritization", p.83, section 4.6.2 Reprioritization

Learning objective: 1,3,4

Main responsible: Tim Nilsson

[AGRE+INTDEP] 1 problem

Problem: Interdependencies in release planning

Proposition: A good trade-off approach to reduce the number of pairwise assessments is to perform pairwise assessments on only the highly dependent requirements that you have identified.

Reason: 20% of the most dependent requirements can roughly cover between 70% and 80% of all dependencies in the project.

Correct answer: A (Both are true and the reason answers the proposition)

Motivation: The data from the study in INTDEP shows that 20% of the most dependent requirements can cover between 67% and 79% of all dependencies. Because pairwise assessments is very time consuming, it can be a good trade-off to only do pairwise assessments on the most dependent requirements because of their coverage of the total dependencies in the project.

Reference: [INTDEP], pp. 6-7

Learning objective: 1,5,7

Main responsible: Olof Knape