Problem 1: Platform requirements

Proposition: Justifying requirements (explaining why each requirement is there) is good for preventing bad platform requirements from being implemented.

Reason: Including a justification for why we specified the platform requirement as we did, enables potential suppliers to suggest more cost-effective solutions that we might not know about.

Correct Answer: A (Both the proposition and the reason are correct statements, AND the reason explains the proposition in a correct way)

Motivation: The proposition is true, the potential supplier can via the justification understand why the platform requirements were written as they were and thus point out any fallacies. The reason is also correct and supports the proposition. By understanding why the platform requirement was written as it was, a suggestion of a better solution can be delivered that better satisfies the desired functionality.

Reference: LAU pages 200-202

Learning objective: 1, 11

Problem 2: Quality Grid

Proposition: A quality grid is used to see how good the quality of the end product is.

Reason: The quality grid is a checklist that specifies which quality requirements have been fulfilled and which haven't.

Correct Answer: E (Both the proposition and the reason are false)

Motivation: The proposition and the reason are false. In a quality grid you specify quality factors the product has. These factors are then graded based on how important they are. This enables the requirements engineers to find the key important and critical factors that need quality requirements. It is not used as a validation checklist for how good of an end product the supplier has delivered.

Reference: LAU Chapter 6, pages 226-227

Learning objective: 3, 4, 13

Problem 3: Quality requirement (open metric)

Proposition: A quality requirement should include clearly specified numerical values.

Reason: There is a significant risk that suppliers don't know how to estimate values on their own.

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

Motivation: The proposition is false since the specified quality requirements might be impossible to satisfy at reasonable costs. The reason is a true statement because suppliers don't always have

enough domain knowledge. Therefore suppliers may choose the solution that benefits them the most instead of the optimal solution for the customer.

Reference: LAU Chapter 6, pages 228 -231

Learning objective: 4, 15, 19

Problem 4: Quality requirement (maintenance requirements)

Proposition: One reason for writing maintenance requirements is to save money for the customer of a system.

Reason: Maintenance requirements are written to make the customer able to change things himself and not rely on the supplier.

Correct Answer: C (The proposition is true, but the reason is false)

Motivation: The proposition is true since a maintenance requirement is written to guard against high supplier fees. Supplier may charge high fees for changes since they must be implemented and it's still cheaper for the customer than buying a complete new system. The reason is false simply because the maintenance requirements are written to specify what the supplier shall deliver.

Reference: LAU Chapter 6, pages 280-283

Learning objective: 3, 7

Problem 5: Writing a proposal

Proposition: The "Task & Support" specification technique is usually a good way for customers to specify requirements in order to help the supplier when he is writing a proposal.

Reason: The supplier can understand the customer's situation, comment on his example solutions and describe proposed solutions in convincing terms.

Correct answer: A (Proposition and reason are both true statements. The reason explains the proposition)

Motivation: Both the proposition and the reason are correct. The proposition is correct since "Task & Support" describes tasks, domain problems and possible solutions. This helps the supplier understand the customer's situation and gives him the opportunity to comment the customers solution at the same time as he is proposing own solutions. Since this corresponds to the reason it is also correct and explains the proposition.

Reference: Lau: Chapter 7 pages 308-312

Learning objectives: 7, 15

Problem 6: Ambiguity

Proposition: It is important that domain requirements are unambiguous and can only be interpreted in one way.

Reason: Ambiguity in requirements can lead to confusion among developers and in some cases result in implementations that were in fact not intended.

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

Motivation: The proposition is false and the reason is true because, while it is important for the requirements document to be unambiguous, the domain level requirements are allowed to be interpreted differently from person to person. The feature requirements however must be unambiguous as they are closely tied to the implementation. If these are unclear problems will occur since the requirements document is the base from which the implementation is made.

Reference: Lau: Chapter 9 pages 375-381

Learning objectives: 1, 3, 7

Problem 7: Reviews

Proposition: Reviews should be performed after the product has been delivered in order to validate the requirements.

Reason: Reviews are used to identify defects in all parts of the specification.

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

Motivation: The proposition is false because reviews should be carried out at least before signing a contract or during the process which is done before the delivery of the final product. The reason is true because reviews are done to ensure the quality of the specification.

Reference: Lau: Chapter 9 pages 390-393

Learning objectives: 12, 16

Problem 8: The QUPER model

Proposition: Using the QUPER model instead of the "gut feeling" approach of estimating quality requirements makes you more aware of how you have positioned yourself (quality wise) on the market.

Reason: Using the QUPER model implies that you do extensive analysis of how competitors have positioned themselves on the market with regards to quality.

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

Motivation: The proposition is correct because the QUPER model kind of forces you to look outside of your own company, which is beneficial for understanding your own and your competitors' market

position with regards to quality. The reason is false because the competitor research does definitely not have to be extensive. A rough estimation will be enough to use the QUPER model, even though the results may not be as good.

Reference: QUPER, pages 285-287, 291-293

Learning objectives: 3, 4, 8, 13, 17

Problem 9: AGRE

Proposition: In an Agile project, it is easy to gain consensus among various customer groups.

Reason: The development team can spend less time developing the documentation in the agile project.

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

Motivation: The proposition is false because it requires more effort to gain consensus among different customer groups in an agile project since the development team needs to integrate the requirements and negotiate with each customer group. The reason is true because the minimum documentation is one of the practices in Agile development.

Reference: AGRE

Learning objectives: 2, 15, 17

Problem 10: Interdependencies

Proposition: It is highly motivated to identify the requirements with the most dependencies before prioritizing for a release plan.

Reason: Making a prioritization with only these highly dependent requirements can be a powerful way to reduce the total effort when making a release plan.

Correct answer: A (Proposition and reason are both true statements. The reason explains the proposition)

Motivation: When making for example pairwise comparison to prioritize requirements, it is important to try to reduce the amount of assessments. About 20% of the requirements are involved in roughly 65-80% of the interdependencies of all requirements. By finding the most dependent requirements and thus still cover the most of the interdependencies would reduce the number of requirements a lot and in the end the effort and hours to make the prioritization.

Reference: INTDEP

Learning objectives: 1, 13, 17