Exam problems hand-in W6

[Lau:5,7] 1 problem

Problem 1: Older platform requirement
Proposition: When a product is specified to run on an older platform, a justification for that platform should be included.
Reason: An older platform is preferably avoided, thus shall the requirement specify why that platform is to be supported.
Correct answer: B (Proposition and reason are correct, but the reason does not explain the proposition)
Motivation: A further explanation of the proposition would be that if it is explained why the older platform is to be supported then a potential supplier could be encouraged to find more cost-effective solutions than holding on to the old platform.
Reference: Lau: Chapter 5.2
Learning objective: 1.3.3
Main responsible: Felix Hedlund

[Lau:6, QUPER] 2 problems

Problem 2: QUPER
Proposition: The QUPER model supports the identification of quality goals, and the cost for reaching these.
Reason: Breakpoints and barriers helps compare the cost and benefit of quality improvements.
Correct answer: A (Both the proposition and the reason are correct statements, and the reason explains the proposition in a correct way.)
Motivation: Breakpoints provides a way to correlate improvements in quality with benefit, and barriers provides a way to correlate improvements in quality with increased costs. Together these can be used to set goals for what quality levels should be targeted with releases, and how much it would cost to reach these targets.
Reference: QUPER p.44
Learning objective: 1.1.1, 1.1.3, 1.3.3
Main responsible: Eric Ottosson

Problem 3: Open target in quality requirements
Proposition: Using open target without expectations when specifying quality requirements could be problematic.

Reason: If the customer does not know how to measure the quality of the system, the supplier will have to do extra work by studying the specifications and define some metrics to be used.
Correct answer: C (Proposition is true but the reason is false.)
Motivation: The extra work could be problematic because the supplier may not know what the customer expects. This could lead to a much more expensive system than necessary or a system that performs too poorly.
Reference: LAU 6.3 pages 228-230
Learning objective:1.3.1
Main responsible: Max Arvidsson

[Lau:9, INSP] 2 problems

Problem 4: Inspections
Proposition: An inspection is an easy way to correct faults in a requirements specification.
Reason: An inspection is one of the most efficient ways to improve quality in systems.
Correct answer: D (The proposition is false, but the reason is a true statement.)
Motivation: An inspection only finds the faults. It is not a method for correcting them.
Reference: INSP, p.67
Learning objectives: 1.1.1, 1.2.4
Main responsible: Lisa Stenström

Problem 5: Quality criteria
Proposition: If all the customer's requirements are covered in the specification it is complete and thus more understandable.
Reason: Completeness is when all the customer's expectations are covered.
Correct answer: D. The proposition is false, but the reason is a true statement.
Motivation: The proposition is false since there are many trivial requirements and if all these were specified the specification would be bloated and hard to understand. It is important to find a balance and be sure that all non-trivial requirements are covered.
Reference: Lau, 376
Learning objectives: 1.1.1, 1.2.4
Main responsible: Petter Henriksson

[MDRE+PRIO+RP] 1 problem

Problem 6: Estimating resources in release planning
Proposition: Estimates of the likely amounts of various resources needed to implement each feature must be determined during the modeling phase.

Reason: Estimates made during an early stage of the development life cycle are generally fraught with uncertainties.
Correct answer: B - Both proposition and reason are correct but reason does not explain proposition.
Motivation: Explanation to the proposition would be that we have to estimate resources or we will not find a solution. The proposition explained by the reason would have been that estimating effort and cost is a major challenge in software engineering.
Reference: RP p. 51 Estimate resources
Learning objectives: 1.1.1, 1.1.3
Main responsible: Ludvig Nyqvist

[AGRE+INTDEP] 1 problem

Problem 7: Requirement interdependencies
Proposition: Pair-wise comparision of all requirements is a safe way to identify interdependencies, but is in most cases unnecessarily expensive.
Reason: It is often enough to identify requirements with the highest amount of interdependencies.
Correct answer: A (Both the proposition and the reason are correct statements, and the reason explains the proposition in a correct way.)
Motivation: While many requirements have a few interdependencies there is generally a set of highly interdependent requirements which will cover the vast majority of all interdependencies (roughly 20%).
Reference: INTDEP p.87, 91
Learning objective: 1.1.1, 1.1.7, 1.3.5
Main responsible: Eric Ottosson