

Sample Exam – Answers

Sample Exam set A

Version 1.3.2

ISTQB® Test Management Syllabus Advanced Level

Compatible with Syllabus version 3.0

International Software Testing Qualifications Board



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This document is maintained by a core team from ISTQB® consisting of the Syllabus Working Group and Exam Working Group.

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Introduction

Purpose of this document

The example questions and answers and associated justifications in this sample exam have been created by a team of subject matter experts and experienced question writers with the aim of:

- Assisting ISTQB® Member Boards and Exam Boards in their question writing activities
- Providing training providers and exam candidates with examples of exam questions

These questions cannot be used as-is in any official examination.

Note that real exams may include a wide variety of questions, and this sample exam *is not* intended to include examples of all possible question types, styles or lengths, also this sample exam may both be more difficult or less difficult than any official exam.

Instructions

In this document you may find:

- Answer Key table, including for each correct answer:
 - K-level, Learning Objective, and Point value
- Answer sets, including for all questions:
 - Correct answer
 - Justification for each response (answer) option
 - K-level, Learning Objective, and Point value
- Additional answer sets, including for all questions [does not apply to all sample exams]:
 - Correct answer
 - Justification for each response (answer) option
 - K-level, Learning Objective, and Point value
- *Questions are contained in a separate document*
- The main part covers a full Sample exam paper acc. to CTAL-TM v3.0 Structure and Rules. The Appendix covers additional questions, which are not mandatory in a complete CTAL-TM v3.0 sample exam set. The main part and the appendix of this document covers at least one question for each LO. Some questions in the appendix are marked with e.g. #A10a and #A10b, that means that we provided 2 sample exam items for one Learning objective.

Answer Key

Question Number (#)	Correct Answer	LO	K-Level	Points
1	a	TM-1.1.1	K2	1
2	a	TM-1.1.2	K2	1
3	c	TM-1.2.1	K2	1
4	a	TM-1.2.2	K2	1
5	a	TM-1.2.3	K2	1
6	c	TM-1.2.4	K2	1
7	d	TM-1.2.7	K4	3
8	d	TM-1.2.7	K4	3
9	a	TM-1.3.1	K2	1
10	c	TM-1.3.2	K2	1
11	a	TM-1.3.4	K4	3
12	a	TM-1.3.4	K4	3
13	b	TM-1.3.5	K2	1
14	c	TM-1.4.1	K2	1
15	a	TM-1.4.2	K4	3
16	a	TM-1.4.2	K4	3
17	d	TM-1.4.3	K3	2
18	a	TM-1.4.3	K3	2
19	a	TM-1.5.1	K2	1
20	c	TM-1.5.2	K2	1
21	a, e	TM-1.5.4	K3	2
22	d	TM-1.5.4	K3	2
23	a	TM-1.6.1	K2	1
24	c	TM-1.6.3	K4	3
25	c	TM-1.6.3	K4	3

Question Number (#)	Correct Answer	LO	K-Level	Points
26	b	TM-1.6.4	K2	1
27	c	TM-2.1.1	K2	1
28	a	TM-2.1.2	K2	1
29	d	TM-2.1.3	K4	3
30	a	TM-2.1.3	K4	3
31	d	TM-2.2.2	K2	1
32	a, b	TM-2.2.3	K4	3
33	a	TM-2.2.3	K4	3
34	b	TM-2.3.1	K3	2
35	b	TM-2.3.1	K3	2
36	c	TM-2.3.2	K2	1
37	b	TM-2.3.3	K2	1
38	c	TM-2.3.4	K2	1
39	b	TM-2.3.5	K3	2
40	b, c	TM-2.3.5	K3	2
41	b	TM-2.3.6	K2	1
42	d	TM-3.1.1	K2	1
43	a	TM-3.1.2	K4	3
44	a	TM-3.1.2	K4	3
45	c	TM-3.1.3	K2	1
46	d	TM-3.1.4	K2	1
47	d	TM-3.1.5	K2	1
48	b	TM-3.2.1	K2	1
49	b	TM-3.2.2	K3	2
50	a	TM-3.2.2	K3	2

Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
Section: Test Process					
1	a	<p>a) Is correct. Per syllabus section 1.1.1, all aspects of the test plan need to be accepted by all stakeholders. Therefore, reaching consensus among all stakeholders is the most essential activity in developing and establishing a test plan.</p> <p>b) Is not correct. The test plan relates to the test objectives, but compared to option a) it is NOT the most essential activity in developing and establishing a test plan. Regulatory standards are not applicable <u>in all</u> test situations.</p> <p>c) Is not correct - Establishing readiness to begin testing is a typical test monitoring and controlling activity (1.1.2)</p> <p>d) Is not correct. Risk mitigation relates to the overall project and is not unique for the individual stakeholders.</p>	TM-1.1.1	K2	1
2	a	<p>a) Is correct. Per syllabus section 1.1.2, the primary goal of test monitoring is to continuously track and compare actual test progress and status against the planned baseline to provide visibility to stakeholders.</p> <p>b) Is not correct. Comparing actual vs. expected results is part of test execution/result evaluation; test results are only one input to monitoring and do not define its goal.</p> <p>c) Is not correct. Assessing newly identified or changed risks belongs to risk management/test control; but the assessment and decisions are control activities.</p> <p>d) Is not correct. Implementing the test plan and initiating corrective actions are activities of test control; not test monitoring.</p>	TM-1.1.2	K2	1

Section: Context of Testing					
3	c	<p>a) Is not correct. Automation testers would not be involved in initial discussions, development leads are stakeholders and finance staff are customer stakeholders.</p> <p>b) Is not correct. Security architects would be involved in initial discussions, but the ops team is not necessarily involved early in initial discussions.</p> <p>c) Is correct. These are all stakeholders according to the syllabus. These are all similar-level stakeholders who have direct influence on the project and its outcomes. They need to be involved in detailed discussions to ensure that their expectations, requirements, and constraints are understood and addressed by the test manager.</p> <p>d) Is not correct. Project managers for other projects and the test management tool vendor are not involved in any discussions for this project, however the trainer is a stakeholder and can provide input into early planning discussions.</p>	TM-1.2.1	K2	1

4	a	<p>a) Is correct. A stakeholder (power–interest) matrix helps test management identify high-influence, high-interest stakeholders early, tailor communication, and proactively manage their expectations and engagement.</p> <p>b) Is not correct. The matrix helps identify key stakeholders, but their perspectives should inform—not automatically determine—major decisions, which must also consider objectives, risks, evidence, and constraints.</p> <p>c) Is not correct. Stakeholder prioritization is project-specific and dynamic; a matrix does not establish universal, binding priorities that apply across all projects.</p> <p>d) Is not correct. Stakeholder analysis supports risk management but does not replace it; risks still require systematic identification, assessment, mitigation, and monitoring.</p>	TM-1.2.2	K2	1
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5	a	<p>a) Is correct. Coaching and mentoring on CI and agile testing directly addresses the team's difficulty with short iterations and continuous testing, building the skills, practices, and automation needed for fast, reliable feedback.</p> <p>b) Is not correct. Extending release cycles avoids the problem and undermines the hybrid approach by delaying feedback and reverting toward a sequential cadence.</p> <p>c) Is not correct. Limiting stakeholder interaction may reduce noise, but it weakens essential collaboration and feedback loops that agile/hybrid models rely on.</p> <p>d) Is not correct. "Whole-team quality" does not mean reducing focus on testing; deprioritizing testing during the transition increases risk instead of enabling the team to adapt.</p>	TM-1.2.3	K2	1
6	c	<p>a) Is not correct. The presence of regular 3-week iterations contradicts a purely sequential life cycle.</p> <p>b) Is not correct. Although iterations fit iterative, the phase gate "testing only after requirements completed" contradicts a purely iterative model.</p> <p>c) Is correct. The use of iterations (3-week cycles) indicates iterative practice, while gating ('testing only after requirements completed') reflects sequential practice. In combination, this is hybrid. The syllabus states that "Hybrid life cycle models are a combination of sequential and iterative models" (section 1.2.3).</p> <p>d) Is not correct. No DevOps hallmarks mentioned (CI/CD, deployment, monitoring); automation alone isn't DevOps-specific. (cf. [CTFL V.4]).</p>	TM-1.2.4	K2	1

7	b, c	<p>a) Is not correct. Post-rollout retrospectives and long-term strategy work are valuable, but they don't most directly stabilize a daily release cadence in the short term.</p> <p>b) Is correct (choose this). Expanding automated regression testing is a key test-planning decision that boosts efficiency and preserves the tight timelines of daily releases.</p> <p>c) Is correct (choose this). Continuous test monitoring of execution progress and defect status enables timely test control, risk-aligned sequencing, and stable day-to-day delivery.</p> <p>d) Is not correct. Defining/clarifying quality gates on short notice adds overhead; in a long-running project they should already be established and are not the most urgent lever.</p> <p>e) Is not correct. Preparing team communication is helpful, especially for distributed teams, but it is less impactful than automation and continuous monitoring for immediate stability.</p>	TM-1.2.7	K4	3
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8	d	<p>a) Is not correct. A separate risk management plan duplicates the existing continuous risk process. Test management should integrate with that process, not recreate it, and this does not address the immediate need for frequent, compliant regressions in maintenance.</p> <p>b) Is not correct. A communication/coordination concept for on-site and off-site testers is useful, but it does not target the project's specific focus: systematic, compliant regression testing driven by frequent changes in a safety-critical context.</p> <p>c) Is not correct. A test automation plan can help CI/CD, but a cloud-based DevOps toolchain is already in place. The key emphasis now is deciding what to regress and in what order with compliance evidence, not primarily selecting/defining automation.</p> <p>d) Is correct. A regression test plan with scope, risk-based prioritization, bidirectional traceability (changes ↔ tests/requirements), and exit criteria directly supports safety-critical compliance (e.g., IEC 62304/FDA), two-week sprints, and the maintenance phase's frequent regression needs.</p>	TM-1.2.7	K4	3
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Section: Risk-based testing					
9	a	<p>a) Is correct. To be most effective, risk analysis should include stakeholders, in this case especially of independent experts in cloud architecture. Relying on statements of the vendor is not enough. In the scenario, the test team underestimated the risk likelihood of a system outage due to the migration of a web application to the cloud. They relied on the cloud system provider's estimation, which was not accurate or reliable. This led to insufficient reliability testing, which failed to detect the defects that caused the website to become unavailable for two days. To avoid such problems in the future, the test team should involve additional stakeholders in risk analysis, especially independent experts in cloud architecture. These stakeholders can provide more objective and realistic assessments of the risk likelihood, based on their knowledge and experience.</p> <p>b) Is not correct. In risk-based testing, a moderate risk level only justifies moderate test intensity.</p> <p>c) Is not correct. Involving experienced testers is not enough for obtaining a reliable assessment of the risk level. A broad group of stakeholders is needed, including independent experts in cloud architecture.</p> <p>d) Is not correct. It appears that the test team did follow a risk-based testing strategy. Had the risk been assessed correctly, the test team would have conducted reliability testing and detected the defects.</p>	TM-1.3.1	K2	1
10	c	<p>a) Is not correct. The question does not mention interviewing the stakeholders, only providing them with a prepared spreadsheet.</p> <p>b) Is not correct. A checklist would be a list of items to check, not a spreadsheet with multiple columns to fill in.</p> <p>c) Is correct. You organize a workshop with the stakeholders to jointly identify the failure modes of component integration by filling in the template.</p> <p>d) Is not correct. Brainstorming is a spontaneous technique to share ideas, but in this case a spreadsheet has been prepared which guides the risk identification.</p>	TM-1.3.2	K2	1

11	a	<p>a) Is correct - Risk A gives us an exposure of $40\% * 1,500,000 = 600,000$ € which is the highest, hence this should be prioritized during testing. As a prototype makes main features of the application testable to the users early, this method is appropriate to mitigate the risk. B and D are project risks, therefore other (non-) testing activities are needed.</p> <p>b) Is not correct - Risk B is not a product risk – hence cannot be mitigated by testing.</p> <p>c) Is not correct - Risk C gives us an exposure of $90\% * 100,000 = 90,000$ € which is less than Risk A, hence this is not the priority during testing. Reviewing can mitigate the risk of non-understandable documentation.</p> <p>d) Is not correct - Risk D is not a product risk – hence cannot be mitigated by testing.</p>	TM-1.3.4	K4	3
12	a	<p>a) Is correct. It follows the principles of risk-based testing, which states that the test effort should be proportional to the risk level, and that the most qualified people should test the test items with the highest risk levels. This ensures that the most critical features of the application are tested thoroughly and effectively. It also uses both static testing and dynamic testing, which are complementary and can cover different types of risks.</p> <p>b) Is not correct. It does not use both static testing and dynamic testing for all features, which may result in missing some risks that can only be detected by one or the other. It also does not assign the testers based on their skills and experience, which may affect the quality of testing.</p> <p>c) Is not correct. It skips testing for the features with lower risk levels, which may still have some defects that can affect the quality of the product. It also does not assign the testers based on their skills and experience, which may affect the quality of testing.</p> <p>d) Is not correct. It skips testing for the features with lower risk levels, which may still have some defects that can affect the quality of the product. It also does not use dynamic testing, which is essential for verifying the functionality and performance of the product.</p>	TM-1.3.4	K4	3

13	b	<p>The situation demands a lightweight technique, since the application is non-safety-critical and lead time and effort are limited both for the team and for the stakeholders.</p> <p>a) Is not correct. Hazard analysis is a heavy-weight technique.</p> <p>b) Is correct. Pragmatic Risk Analysis and Management (PRAM) is a lightweight technique that can work based on stakeholder input. PRAM involves defining, assessing, and deciding on the risks that matter for the project, and using direct or indirect measures to mitigate them. PRAM is suitable for Agile projects, as it allows quick and flexible risk analysis and management without requiring formal documentation or specifications.</p> <p>c) Is not correct. Systematic Software Testing is attest approach that requires requirements specifications which are missing in your situation.</p> <p>d) Is not correct. Fault tree analysis is a time-consuming heavy-weight technique.</p>	TM-1.3.5	K2	1
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Section: Project Test Strategy					
14	c	<p>a) Is not correct. Test types and test techniques are part of a test approach. However, test metrics are – together with the test approach – part of the test strategy.</p> <p>b) Is not correct. Test levels and test techniques are part of a test approach. However, test entry/exit criteria are – together with the test approach – part of the test strategy.</p> <p>c) Is correct. Choosing a test approach is about making key decisions concerning test levels, test types and test techniques.</p> <p>d) Is not correct. Test levels and test techniques are part of a test approach. However, test deliverables are – together with the test approach – part of the test strategy.</p>	TM-1.4.1	K2	1
15	a	<p>a) Is correct. Risk-based testing helps to focus on the most important aspects of testing in terms of quality, reliability, and customer satisfaction, while also considering the constraints of budget, time, and resources. Risk-based testing also supports Agile testing by allowing frequent adjustments of test priorities based on feedback and changes.</p> <p>b) Is not correct. Model-based testing requires a high initial investment in creating and maintaining models, which may not be feasible given the budget and time constraints. Model-based testing also assumes that the requirements are stable and complete, which may not be the case in an Agile project.</p> <p>c) Is not correct. Experience-based testing relies heavily on the testers' skills and knowledge, which may vary among the test team members. Experience-based testing also lacks objective criteria for test coverage and quality, which may not meet the customer's expectations.</p> <p>d) Is not correct. Acceptance testing most likely does not cover all of the aspects of quality and reliability that are relevant for the banking sector such as security, performance, usability, etc.</p>	TM-1.4.2	K4	3

16	a	<p>a) Is correct. Risk-based testing helps to prioritize the test objectives and test cases based on the security, performance, and reliability risks, while white-box testing helps to verify the internal structures and logic of the web application. Pairing testers and developers is helpful to cover the customer's requirements and enable a high degree of automation. This test approach is suitable for Agile SDLC models and requires skilled testers.</p> <p>b) Is not correct. Model-based testing is more suitable for embedded software development than web application development, but the given scenario provides no sufficient basis for it. The test approach does not check the internal structures and logic of the web application, which are important for security, performance, and reliability. Moreover, the demo is probably insufficient as acceptance testing in the context of online banking.</p> <p>c) Is not correct. Exploratory testing relies on the testers' intuition and creativity. Although usability is typically an issue concerning web applications, this does not satisfy the demands of the given scenario. Exploratory testing may not be consistent or sufficient for testing the security, performance, and reliability aspects of the web application. Agile SDLCs that have different roles for development and test typically also do have at least two different test levels and most do.</p> <p>d) Is not correct. The given approach focuses on verifying the functionality and quality of the web application against the specified requirements and criteria, but does not address the security, performance, and reliability risks that may arise from the web application's environment, interfaces, or data.</p>	TM-1.4.2	K4	3
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17	d	<p>a) Is not correct. This goal is not specific or measurable enough. What are "serious" defects and how is the "user experience" measured? This is not a S.M.A.R.T. test objective, as it is vague and subjective. It does not define what are "planned functions", "serious defects", or "user experience".</p> <p>b) Is not correct. This is not a S.M.A.R.T. test objective, as the measurement method is not suitable, as the number of failed test cases does not indicate the number of faulty functions.</p> <p>c) Is not correct. This is not a S.M.A.R.T. test objective, as it may be unrealistic or unattainable. It does not consider the complexity and limited resources of the project, which may affect the reliability of the e-commerce system.</p> <p>d) Is correct. It is a S.M.A.R.T test objective because it is specific. It is measurable in terms of defects found during beta testing or how it compares the last release. There are no indicators that suggest that this goal has not been achieved, it fits the management's target and the time frame is given by the beta test.</p>	TM-1.4.3	K3	2
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18	a	<p>a) Is correct. The objective is specific, measurable, achievable, relevant, and timely. The objective is specific because the objective is clearly defined – the time it takes to complete a purchase. It is measurable because it has a quantifiable criterion for measuring progress: 90% of users should be able to complete the purchase within 3 minutes. The objective is realistic and achievable because it is feasible within the given resources, time frame and is based on a specific user group. It is relevant because it is aligned with the overall project objectives and expectations and usability is an important aspect of the success of an online shopping app. It is timely because it has a defined deadline and should be achieved within the next 2 months (see section 1.4.3).</p> <p>b) Is not correct. This is not specific, or relevant. It is not specific because it does not define what level of automated tests means or how to measure it. It is not relevant because it is not aligned with the overall project objectives and expectations.</p> <p>c) Is not correct. This is not measurable or timely. It is not measurable because it does not have specific criteria for measuring progress or determining whether conformity to the standard has been reached. It is not timely because it does not have a defined deadline, which could be the end of each release or iteration.</p> <p>d) Is not correct. This not measurable how customer feedback evolves and not defined which acceptance criteria apply and therefore not achievable. It is not achievable e.g. no negative feedback anymore, because it is not measurable how to achieve goal this within the development phase.</p>	TM-1.4.3	K3	2
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Section: Improving the Testing Process					
19	a	<p>a) Is correct. It's the third step of the IDEAL process and should follow the steps that have already been carried out so far (see syllabus, section 1.5.1).</p> <p>b) Is not correct. It's the fourth step of the IDEAL process, and thus creating a plan should be carried out before (see syllabus, section 1.5.1).</p> <p>c) Is not correct. This is the first step of the IDEAL process and has already been carried out. (see syllabus, section 1.5.1).</p> <p>d) Is not correct. This is the second step of the IDEAL process and has already been carried out. (see syllabus, section 1.5.1).</p>	TM-1.5.1	K2	1
20	c	<p>a) Is not correct. The syllabus states that model-based improvement can be performed both at an organizational and project level (see syllabus, section 1.5.2).</p> <p>b) Is not correct. Rather than taking all TMMi level 2 and level 3 process areas into account it would be much more beneficial to consider the process areas that are especially project related and already applied with the current maturity level (see justification for answer C).</p> <p>c) Is correct. Per syllabus (see section 1.5.2, "Test Maturity Model integration (TMMi)"). Additionally, the syllabus mentions the specific "TMMi in the Agile world" guideline that would be beneficial here.</p> <p>d) Is not correct. The scrum guide does not provide details on how to do test improvement.</p>	TM-1.5.2	K2	1

21	a, e	<p>a) Is correct. Defect information should be analyzed to evaluate whether the quality risk analysis was correct in a retrospective (see syllabus, section 1.5.4, list with areas to be considered).</p> <p>b) Is not correct. While a good issue to consider in a retrospective, it is a project-wide issue, not a test-related issue. This retrospective is focusing on the test (see description of the exam question).</p> <p>c) Is not correct. This is supposed to happen during the implementation process and is not part of the test improvement process (see syllabus, section 1.5.4).</p> <p>d) Is not correct. This is part of test control and is not part of the retrospective (see syllabus, section 1.5.4).</p> <p>e) Is correct. This check is important. The earlier defects are found, almost always the more cost-effective it is (see syllabus, section 1.5.4, list with areas to be considered).</p>	TM-1.5.4	K3	2
22	d	<p>a) Is not correct. Reviewing the test progress, defect detection, and test effectiveness metrics are part of the test evaluation process, which is one of the areas to be considered in a retrospective (see syllabus, section 1.5.4).</p> <p>b) Is not correct. Identifying the root causes of the testing problems and generating improvement ideas is part of the problem analysis and solution generation process, which is one of the areas to be considered in a retrospective (see syllabus, section 1.5.4).</p> <p>c) Is not correct. Assigning responsibilities and defining goals and metrics for the improvement actions are part of the action planning and implementation process, which is one of the areas to be considered in a retrospective (see syllabus, section 1.5.4).</p> <p>d) Is correct. Evaluating the test processes and tools against the industry best practices is NOT part of a typical retrospective, but typically part of test process improvement activities.</p>	TM-1.5.4	K3	2

Section: Test Tools					
23	a	<p>a) Is correct. The successor of the currently used tool might have advantages like licensing but if you have not done a requirements analysis, you might not know if the successor fills all of your requirements. Also there might not be a successor.</p> <p>b) Is not correct. The answer is being listed as a best practice for tool selection in section 1.6.1.</p> <p>c) Is not correct. The answer is being listed as a best practice for tool selection in section 1.6.1.</p> <p>d) Is not correct. The answer is being listed as a best practice for tool selection in section 1.6.1.</p>	TM-1.6.1	K2	1

24	c	<p>a) Is not correct. This is a valid concern, as open-source tools may not have the same level of documentation, training, and technical support as commercial tools. However, this is not the key concern, as you can look for online communities, forums, and tutorials that can help you with the tool. Moreover, the fact that another software product line within your company is using the tool suggests that there is some internal knowledge and experience that you can leverage.</p> <p>b) Is not correct. This is also a valid concern, as usability can affect the ease of learning, using, and maintaining the tool. However, this is not the key concern, as usability is subjective and depends on the preferences and skills of the users. You can evaluate the usability of the tool by trying it out yourself or asking for feedback from the other software product line that is using it.</p> <p>c) Is correct. As written in the syllabus, test automation requires a certain level of test process maturity to be effective and efficient. Therefore, you need to assess whether your test process is mature enough to adopt to the next level of test automation using the tool to mitigate residual risks.</p> <p>d) Is not correct. This is another valid concern, as test automation involves creating and managing various artifacts, such as test scripts, test data, test results, and test reports. However, this is not the key concern, as the maintainability of the artifacts depends on the quality and design of the tool, as well as the best practices and standards followed by the users. You can evaluate the maintainability of the artifacts by reviewing the existing ones created by the other software product line that is using the tool.</p>	TM-1.6.3	K4	3
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25	c	<p>a) Is not correct. Tool A is not the best option, because it has the lowest benefit of all three tools. Although it has the lowest initial cost, it also has the lowest reduction in effort (annually $12,000 - 2,000 = 10,000$ \$, after 1 year a ROI of 100%) and time and the lowest increase in coverage. Tool A only supports functional testing, which is not sufficient for testing an agile software development project.</p> <p>b) Is not correct. Tool B is not the best option. It has higher initial cost as tool A. Although there has been an average reduction in effort (annually $18,000 - 3,000 = 15,000$ \$, so even after 1 year a ROI of 100%) and time as well as an average increase in overlap and supports both functional and performance testing. However, Tool B does not support security testing, which is also important for testing an agile software development project. Besides that, other offers are still superior.</p> <p>c) Is correct. Tool C is the best option among the three of them, because it has the highest reduction in effort (annually $24,000 - 4,000 = 20,000$ \$, so even after 1 year a ROI of 100%) and time and the highest improvement in coverage, which are important factors for improving the quality and efficiency increase of testing. Tool C also supports functional, performance, and security testing, which are essential for testing an agile software development project. This means that tool C offers the greatest benefit in relation to its cost and therefore the greatest value for the project.</p> <p>d) Is not correct. None of the tools is not the best option, because all of the tools provide a positive ROI of 100% after 1 year and provide a reduction in manual testing effort making the investment worthwhile.</p>	TM-1.6.3	K4	3
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26	b	<p>a) Is not correct. This activity is not necessary because the old tool will be retired.</p> <p>b) Is correct. This answer concerns retirement, as there are probably lots of existing scripts, and regression test scripts are the ones used most often. This is because:</p> <ul style="list-style-type: none"> • Regression test scripts are the ones that are used most often to verify the functionality and performance of the software after changes or updates. • Converting the regression test scripts to the new tool will allow you to show the value of the new tool with a pilot phase and proof of concept as quickly as possible, as you can compare the results and efficiency of the new tool with the old one. <p>c) Is not correct. This activity is not necessary because the old tool will be retired.</p> <p>d) Is not correct. Your goal is to demonstrate the value as soon as possible. Even if you would prefer it, it is not realistic to convert all the scripts in one go. Probably you wouldn't need all the existing regression test scripts, with the old tool over time.</p>	TM-1.6.4	K2	1
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Section: Test Metrics					
27	c	<ol style="list-style-type: none"> 1. Product risk coverage is a test monitoring and test control metric as well as test completion. 2. The number of resolved defects vs. total number of defects found is a test monitoring and test control metric. 3. The percentage of actual automated vs. planned automated test cases is a test completion metric. 4. The ratio of actual vs. planned effort (in hours) for testing activities is a metric for test monitoring and test control according to the syllabus. <p>Hence the correct answer is c) 1B, 2B, 3C, 4B.</p>	TM-2.1.1	K2	1
28	a	<ol style="list-style-type: none"> a) Is correct. Test metrics are used to measure test progress and to assess whether the test exit criteria or the test tasks associated with the exit criteria or test objectives have been met. (see also CTAL TM Syllabus 3.0, Section 2.1.2). This statement is true because test metrics can help to track the status and outcome of the testing activities, such as the number of test cases executed, the number of defects found, the defect density, the test coverage, the test effectiveness, and so on. These metrics can help to evaluate whether the testing process has achieved the desired level of quality and completeness, and whether the software product is ready for release or not. b) Is not correct. This statement describes the role of test control, not test metrics. Test control uses the information from test monitoring, which is based on test metrics, to provide guidance and corrective actions. But metrics by themselves do not provide recommendations for actions. c) Is not correct. This statement describes the role of test closure, not test metrics. Test closure collects data from completed test activities, which may include test metrics to consolidate lessons learned, testware, and other relevant information. d) Is not correct. This statement is false because it describes an example of a control directive, not a test metric. Test metrics may be used to support the decision of reprioritizing tests, but they are not the direct cause of it. 	TM-2.1.2	K2	1

29	c, e	<p>a) Is not correct. Defect priority/source metrics are reactive; they don't forecast schedule risk or surface leading indicators for early delay communication.</p> <p>b) Is not correct. Story-level status/coverage shows progress and focus, but without capacity and risk-level coverage it cannot predict milestone slippage or expose high-risk gaps.</p> <p>c) Is correct. Effort/capacity metrics (remaining effort vs. available velocity) provide a forward-looking view of whether P1/P2 stories and high-risk items can be completed within the synchronized cycles, enabling early, credible delay communication and replanning.</p> <p>d) Is not correct. Retrospective product-risk defect analysis is backward-looking; it supports root-cause improvement but is weak as a near-term delay predictor.</p> <p>e) Is correct. Product-risk coverage (passed vs. open by risk level) highlights under-tested high-risk areas—such as critical interfaces that previously caused late defects—so they can be prioritized early and communicated clearly to management.</p>	TM-2.1.3	K4	3
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30	a	<p>a) Is correct. As it covers all the categories of metrics that are relevant for the project context.</p> <ul style="list-style-type: none"> • Metrics related to product risks are needed to assess the quality and reliability of the system and comply with the legal regulations. • Metrics related to defects are needed to measure the defect density, severity, removal efficiency, etc. • Metrics related to test progress are needed to monitor and control the test activities and resources. • Metrics related to coverage are needed to measure the extent to which the test basis and the system under test are exercised by the tests. • Metrics related to costs and test effort are needed to evaluate the cost-benefit relationship of testing and optimize the test budget. (see syllabus text, section 2.1.3) <p>b) Is not correct. It does not include metrics related to product risks and costs and test effort, which are important for the project context. Moreover, it includes code coverage metrics, which are not suitable for reporting higher level test results in a document-centric sequential development model.</p> <p>c) Is not correct. It does not include metrics related to product risks and costs and test effort, which are important for the project context.</p> <p>d) Is not correct. It does not include metrics related to product risks and costs and test effort, which are important for the project context. Moreover, it includes residual costs for untested components metrics, which are not applicable for a document-centric sequential development model that aims to achieve high levels of coverage.</p>	TM-2.1.3	K4	3
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Section: Test Estimation					
31	d	<p>a) Is not correct. The complexity and size of the software under test affect the scope and depth of the testing activities and tasks, which in turn influence the test effort, time and cost.</p> <p>b) Is not correct. The availability and skills of the test team members determine the productivity and efficiency of the testing process, which in turn influence the test effort, time and cost.</p> <p>c) Is not correct. The quality and reliability of the test tools and environment affect the feasibility and accuracy of the testing activities and tasks, which in turn influence the test effort, time and cost.</p> <p>d) Is correct. The number and severity of the defects found during testing are the outcomes of the testing process, not the inputs. They do not directly affect the test estimation, although they may have an impact on the test execution and reporting.</p>	TM-2.2.2	K2	1

32	a, b	<p>a) Is correct. It is a way of applying risk-based testing, which is part of the testing strategy. By using historical data from past iterations, the test manager can estimate the effort needed to test the most critical and likely risks in the current iteration.</p> <p>b) Is correct. It is a way of applying reactive testing, which is part of the testing strategy. By using test charters, which are high level descriptions of test objectives, the test manager can allocate a fixed amount of time for each exploratory test session, which allows for flexibility and adaptability in testing.</p> <p>c) Is not correct. It contradicts the assumption that developers are following known Agile best practices, including automated unit testing and continuous integration. These practices should ensure that most defects are found and fixed at an early stage, reducing the defect density at system test level.</p> <p>d) Is not correct. This option is incorrect because it contradicts the Agile principle of working software over comprehensive documentation. In an Agile context, detailed test work product documentation is not necessary or desirable, as it adds overhead and reduces agility. Instead, the test manager should focus on creating lightweight and concise test documentation that supports communication and collaboration.</p> <p>e) Is not correct. It contradicts the principle of independence of testing. System tests should not rely on unit test data and environments, as they may not be representative or realistic enough for system level testing. Instead, the test management role should ensure that system tests have their own dedicated test data and environments that match the intended operational conditions.</p>	TM-2.2.3	K4	3
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33	a	<p>a) Is correct. Estimation based on ratios is a metrics-based technique that uses historical data from similar projects to derive standard ratios for test effort. This technique is suitable for waterfall model, where the project requirements and scope are fixed and well-defined. Moreover, this technique can provide a quick and simple estimate for the entire project based on percentages of the overall project effort or staffing levels. (see also syllabus text section 2.2.3)</p> <p>b) Is not correct. In Planning Poker, the test team members discuss and compare their estimates until they reach a consensus. Moreover, this technique may be too time consuming and impractical for estimating the test effort for the entire project.</p> <p>c) Is not correct. Three-point estimation is an expert-based technique, here you make the estimation.</p> <p>d) Is not correct. Wideband Delphi method is more suitable for projects where the test effort is difficult to quantify due to the information and where you are reliant on the experience and different perspectives of the experts. This means that Broadband Delphi cannot be implemented efficiently within the time frame if you can already use the synergies from the existing requirements and historical data. You have to do the estimation yourself.</p>	TM-2.2.3	K4	3
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Section: Defect Management					
34	b	<p>a) Is not correct. Because the phase in which a defect was introduced does not affect whether a defect report is created or not. A defect report should be created for any defect that causes a failure, regardless of when it was introduced.</p> <p>b) Is correct. This is the case in test-driven development, where component tests are used as a form of executable design specification. By the time the development of the component is complete, some or all of the tests will have failed. Therefore, the failure discovered by such a test is not necessarily caused by a defect and is typically not tracked by a defect report according to the defect workflow.</p> <p>c) Is not correct. Because an invalid test that does not match the requirements specification should be corrected or removed, but it does not prevent the creation of a defect report for the failure it causes. A defect report should be created for any failure that reveals a discrepancy between the actual results and the expected results of a test.</p> <p>d) Is not correct. A false-negative result occurs when the tester does not observe the anomaly that causes a failure. However, this does not mean that a defect report is not created. A defect report should be created for any anomaly that is observed, either by the tester or by other means (e.g., logs, reports, alerts).</p>	TM-2.3.1	K3	2

35	b	<p>a) Is not correct. RETESTED does not make sense after it was in RESOLVED state before. RE-OPENED is entered usually from RESOLVED if the confirmation test indicates that the defect is not fixed.</p> <p>b) Is correct. From the initial OPEN and the IN PROGRESS the defect report may be rejected (hence transition to REJECTED). If more information is needed from the reporter, the CLARIFICATION state may be used.</p> <p>c) Is not correct. While DUPLICATE state might fit the situation, the TERMINATED as state Y does not work as the workflow continues after this state back to previous state.</p> <p>d) Is not correct. REJECTED as state Y does not work the workflow continues after this state back to previous state.</p>	TM-2.3.1	K3	2
36	c	<p>a) Is not correct. It makes no sense to defer a defect that's already fixed and closed.</p> <p>b) Is not correct. RESOLVED is not a terminal state.</p> <p>c) Is correct. It corresponds to the most common path through the defect workflow, where a defect report is opened when it is detected, moved to in progress when it is assigned and fixed, resolved when it is verified and confirmed, and closed when it is accepted and archived.</p> <p>d) Is not correct. A defect report can't be in the IN PROGRESS before it's even reported.</p>	TM-2.3.2	K2	1
37	b	<p>a) Is not correct. Defect reports should be created for defects that cannot be resolved with the same iteration.</p> <p>b) Is correct. It is common practice in Agile teams to informally discuss defects with developers. Depending on the findings during this discussion, a defect report may be created afterward.</p> <p>c) Is not correct. When cooperation of more teams is needed the syllabus recommends creating a defect report.</p> <p>d) Is not correct. If the defect is not going to be fixed within the current iteration, it should be stored in the product backlog in the form of a defect report.</p>	TM-2.3.3	K2	1

38	c	<p>a) Is not correct. While it is beneficial that all teams use the same tool for defect management, it is not as relevant as the correct option c. (cf. Syllabus section 2.3.4, 1st bullet point)</p> <p>b) Is not correct. Frequency of the defect management committee meetings should not be dictated by the size of the team (Syllabus 2.3.2 Cross-functional defect management says nothing about this. Syllabus 2.3.4, 2nd bullet point, “Defect management meetings should be more frequent in agile software development than in sequential development models” means that each team can have its own rhythm”).</p> <p>c) Is correct. According to the syllabus (Section 2.3.4, 3rd bullet, “All deliverables, including defects, should be aligned with this project plan.”), the plan for new development and defect resolution must be aligned between teams and made transparent. By aligning their defect resolution priorities with the overall project plan, agile teams can coordinate their testing activities with other teams and stakeholders and avoid conflicts or delays in the delivery of the software product.</p> <p>d) Is not correct. According to the Syllabus text (Section 2.3.4), sometimes it is beneficial for a smaller group of defect management stakeholders to have the final word about prioritization.</p>	TM-2.3.4	K2	1
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39	b	<p>According to the syllabus text (Section 2.3.5), the data items that are mandatory for managing defect reports in most environments are:</p> <ul style="list-style-type: none"> - A defect title with a short summary of the anomaly - A detailed description of the anomaly often including steps to reproduce the failure - Severity of the impact on the system under test and/or the product stakeholders - Priority to fix the anomaly <p>a) Is not correct. This is a mandatory data item for managing defect reports. b) Is correct. Option b is not mandatory. Option b is an example of a data item that may be collected depending on context to help defect resolution, but it is not required for managing the defect report. c) Is not correct. This is a mandatory data item for managing defect reports. d) Is not correct. This is a mandatory data item for managing defect reports.</p>	TM-2.3.5	K3	2
40	b, c	<p>a) Is not correct. The third party already knows that these defect reports are coming from system testing. b) Is correct. These steps (and actual results) will help them understand the defect and the expected results will confirm that the testers understood what was expected. c) Is correct. The third party needs this information to aid their prioritization. d) Is not correct. Technical type of the defect will be determined by the person assigned by the third party to fix the defect. e) Is not correct. Phase of detection is already available (system test).</p>	TM-2.3.5	K3	2

41	b	<p>a) Is not correct. The detection and removal information are not useful for reducing defect introduction.</p> <p>b) Is correct. This will help to analyze when and why defects are currently introduced, and so we can target activities to prevent future defect introduction. (see also syllabus text, section 2.3.6)</p> <p>c) Is not correct. This is used for defect clustering information to target components that need extra testing – but does not directly help prevent defects.</p> <p>d) Is not correct. This tells us how efficient we are at removing defects – it does not help with reducing the introduction of defects.</p>	TM-2.3.6	K2	1
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Section: Test Team					
42	d	<p>a) Is not correct. Ability to apply test techniques to design test cases is an example of professional competence, as it involves specific knowledge and skills to deal with specialist tasks.</p> <p>b) Is not correct. Ability to communicate test results to stakeholders is an example of social competence, as it involves knowledge, skills, and abilities in relation to communication and cooperation.</p> <p>c) Is not correct. The ability to manage test tasks and resources is an example of professional competence as it involves specific knowledge and skills to deal with specialized tasks such as project management.</p> <p>d) Is correct. Ability to learn new technologies and tools is an example of methodical competence, as it involves general knowledge, skills, and abilities that enable the independent completion of complex and new tasks. This shows that the test team member can adapt to changing and emerging situations and challenges, and can acquire new knowledge and skills independently.</p>	TM-3.1.1	K2	1

43	a	<p>a) Is correct. All required skills (Black-box test techniques; communication skills; resilience; test documentation according to CTFL 4.0 Syllabus and ISO 29119) can be determined by the given project situation (see following explanation).</p> <p>b) Is not correct. Programming skills and AGILE certification knowledge are not needed for the tasks of a test analyst (see following explanation).</p> <p>c) Is not correct. Ability to delegate work and intercultural competence are not needed for the tasks of a test analyst (see following explanation).</p> <p>d) Is not correct. Intercultural competence and the ability to delegate are not needed for the tasks of a test analyst (see following explanation).</p> <p>Explanation</p> <ul style="list-style-type: none"> • CORRECT, black-box test techniques are required because system tests are to be designed systematically and based on requirements. (section 3.1.2, 2nd paragraph, 4th bullet point) • FALSE, since the company is specific for domestic customers, it can be assumed that intercultural skills are not necessarily required. (section 3.1.2, 6th paragraph) • CORRECT, particularly in time-critical projects, a high degree of reliability and resilience is often required. (section 3.1.2, 7th paragraph) • CORRECT, collaboration with different teams requires communication skills for project success. (section 3.1.2, 6th paragraph) • FALSE, knowledge of the programming language (technical expertise) is needed for test script programming, (section 3.1.2, 2nd paragraph, 5th bullet point) but this is not a primary task of a test analyst. • FALSE ability to delegate work is necessary primarily as a test manager of a hierarchical test team (section 3.1.2, 7th paragraph). There is no evidence that the Test Analyst should be responsible for leading a team. • CORRECT, The SDLC requires that the tests must be documented according to the good practices (chapter 3.1.2, 4th paragraph, 3rd bullet point). Working to standards is a professional skill that helps. 	TM-3.1.2	K4	3
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		<ul style="list-style-type: none"> FALSE, knowledge in AGILE (a professional skill) is an advantage, but an AGILE certification is not required or defined as entry criteria for the Test Analyst. 			
44	a	<p>a) Is correct. It matches the context: gambling-domain expertise for regulatory compliance, automation of test execution to keep pace with Agile cadence, web/security vulnerability expertise for a secure web app, plus communication/cooperation and self-management to operate effectively in a small cross-functional team under frequent change.</p> <p>b) Is not correct. These are largely traditional test-management/analysis skills; they omit the critical domain, web/security, and hands-on automation capabilities needed here.</p> <p>c) Is not correct. Strong on technical testing and automation, but it lacks gambling-domain expertise and explicit self-management; it also doesn't highlight security vulnerabilities—key for this web platform.</p> <p>d) Is not correct. Although it includes gambling-domain expertise, the technical focus (programming/interfaces) is too generic and misses web/security needs; it also omits test-execution automation and broader Agile soft skills beyond conflict resolution.</p>	TM-3.1.2	K4	3

45	b	<p>Is not correct. The technical and methodological competence of the members of the test team CAN VERY WELL be assessed by demonstrating typical test tasks. (see syllabus, Chapter 3.1.3, third paragraph).</p> <p>Is correct. The Belbin Team Roles model characterizes team roles with different personality and role types and thus focuses on social and personal skills; it is NOT suitable for assessing technical and methodological competence. (see syllabus, chapter 3.1.3, second paragraph)</p> <p>Is not correct. Competencies CAN VERY WELL be assessed through external evidence, certifications, professional experience, and degrees (see syllabus, chapter 3.1.3, fourth paragraph).</p> <p>Is not correct. “Especially in agile software development, teams identify the necessary competencies by regularly participating in retrospectives and receiving feedback. Experienced coaches or mentors support them in further developing their competencies and identifying and closing knowledge gaps.” (see syllabus, chapter 3.1.3, last paragraph).</p>	TM-3.1.3	K2	1
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46	d	<p>a) Is not correct. Training and coaching are different approaches. Training typically involves multiple participants and predefined content, while coaching is individual and personalized. Training is often used to impart basic knowledge, whereas coaching focuses more on developing skills and competencies. (section 3.1.4, first and fourth bullet point).</p> <p>b) Is not correct. For developing social and personal competencies, approaches such as training and coaching are recommended, as they allow for social interaction, feedback, and reflection. (section 3.1.4, last paragraph)</p> <p>c) Is not correct. Mentoring and coaching are the approaches where an experienced person provides guidance to a less experienced person. (section 3.1.4, fourth bullet point)</p> <p>d) Is correct. Coaching is an approach where a team member who is new to a role receives individual guidance from an experienced coach. The coach acts as an ongoing resource, providing advice and assistance. (section 3.1.4, fourth bullet point)</p>	TM-3.1.4	K2	1
47	d	<p>a) Is not correct. The syllabus does not make a blanket statement about the relative importance of skills.</p> <p>b) Is not correct. In the early phases of team formation (Forming and Storming), willingness to help and conflict resolution are more critical than appreciation. The ability to act with appreciation is needed more during the dissolution of a test team or a test team member. (section 3.1.5, third paragraph, bullet lists)</p> <p>c) Is not correct. Test teams undergo dynamic development processes, requiring varying levels of different skills depending on the team's current situation. (section 3.1.5, third paragraph)</p> <p>d) Is correct. The ability to resolve conflicts within the test team is especially needed during the storming phase, helping to establish team rules and role. (section 3.1.5, third paragraph, second bullet point)</p>	TM-3.1.5	K2	1

Section: Stakeholder Relationships					
48	b	<p>a) Is not correct. It does not match the correct categories of quality costs with the examples. Counterexample: Customers complaining about poor performance is an external failure cost, not an internal failure cost. (4D)</p> <p>b) Is correct. Conducting acceptance tests generates appraisal costs and aims to detect errors (1B) Performing Product risk analysis is an prevention cost as it is planned and proactively carried out to avoid poor quality (2A); Long lag time from defect reporting to resolution during testing causing is an internal failure cost as it extents the project duration (3D) customer complaints are an external failure costs because these customer complaints result in decreased future sales (4C).</p> <p>c) Is not correct. It does not match the correct categories of quality costs with the examples. Counterexample: Performing a product risk analysis is a prevention cost, not an appraisal cost. (1A)</p> <p>d) Is not correct. It does not match the correct categories of quality costs with the examples. Counterexample: Customers complaining about poor performance is an external failure cost, not an internal failure cost. (4D)</p>	TM-3.2.1	K2	1
49	b	<p>a) Is not correct. One should not add assumption to calculate the total, and besides, the cost of defect prevention is not mentioned specifically, so you can't just add an arbitrary sum like EUR 100 here. This statement is speculative and cannot be accurately derived from the given information.</p> <p>b) Is correct. This accurately applies the formula: Average Savings per Defect = External Failure Costs - (Appraisal Costs + Internal Failure Costs). In this case, \$5,000 - (\$150 + \$250) = \$4,600.</p> <p>c) Is not correct. Cost of quality is widely used across industries, including software development, to calculate the value of quality-related activities such as testing.</p> <p>d) Is not correct. This calculation incorrectly adds the costs instead of subtracting them. It doesn't account for the costs associated with finding and fixing defects during testing.</p>	TM-3.2.2	K3	2

50	d	<p>a) Includes a correct conclusion. Baseline savings per defect found by testing = $€3,000 - (€400 + €250) = €2,350$. If internal failure cost doubles to €500, savings = $€3,000 - (€400 + €500) = €2,100$.</p> <p>b) Includes a correct conclusion. Prevention cost isn't part of the savings-per-defect-found-by-testing formula, so savings remain €2,350.</p> <p>c) Includes a correct conclusion. With external cost €2,000, savings = $€2,000 - (€400 + €250) = €1,350$ (reduced).</p> <p>d) Is incorrect. If appraisal rises to €500, savings become $€3,000 - (€500 + €250) = €2,250$, i.e., €100 less, not more.</p>	TM-3.2.2	K3	2
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Appendix: Answers to Additional Questions

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
Section: Test Process					
#A1	a	<p>a) Is correct. Per syllabus section 1.1.3, this activity ensures all test activities have been accomplished. This is part of the test closure process, which also includes other activities such as lessons learned and testware archiving.</p> <p>b) Is not correct. Lessons learned is a different test completion activity.</p> <p>c) Is not correct. This is another test closure activity.</p> <p>d) Is not correct. This is part of the lessons learned activity.</p>	TM-1.1.3	K2	1
Section: Context of Testing					
#A2	c	<p>a) Is not correct. Defining the test scope is a test management activity at the system testing level. (see syllabus, section 1.2.5)</p> <p>b) Is not correct. Selecting the tools and test techniques is a test management activity at the system testing level. (see syllabus, section 1.2.5)</p> <p>c) Is correct. Deciding which parts need to be integrated and tested is a test management activity at the component integration testing level, not at the system testing level. (see syllabus, section 1.2.5)</p> <p>d) Is not correct. Managing defects throughout the test process is a test management activity at the system testing level. (see syllabus, section 1.2.5)</p>	TM-1.2.5	K2	1

#A3	c	a) Is not correct. Define the scope is a test management activity for all types of testing. (see section 1.2.6) b) Is not correct. Determine the test tools and test environments is a test management activity for all types of testing. (see section 1.2.6) c) Is correct. Measuring the coverage of statements is a test management activity for white-box testing, but not for functional or non-functional testing, as they do not require understanding the internal code structure of the system under test. d) Is not correct. Monitor test execution based on prioritization of test cases is a test management activity for all types of testing. (see section 1.2.6)	TM-1.2.6	K2	1
Section: Risk-based testing					
#A4	b	a) Is not correct. The unavailability of the UAT team might lead to time/resource pressures, which is a serious factor that can have an adverse effect on the quality. b) Is correct. Business analysts usually need no test automation knowledge, and if they do need it, developers and testers might help them out. c) Is not correct. A geographically distributed development team is a serious factor that can have an adverse effect on the quality. d) Is not correct. The developers being unfamiliar with the new defect management process is a qualification issue among the teams involved.	TM-1.3.3	K2	1

#A5	b	<p>a) Is not correct. Having 10 stakeholders is not too many and they can contribute to the risk analysis from their fields. Hence this is not a difficulty.</p> <p>b) Is correct. Neglecting to implement risk control activities is a major difficulty in risk-based testing (“keen beginnings”).</p> <p>c) Is not correct. Some of the risk items and their risk levels can be relevant in other projects, so not reusing them might mean time loss to the project. However, this might lead to complacency (“Déjà-vu”) and is not the most relevant difficulty.</p> <p>d) Is not correct. If stakeholders understood the residual risk and decided based on this, then the risks were not missed. So this is not a difficulty; but the essence of risk-based testing.</p>	TM-1.3.6	K2	1
Section: Improving the Testing Process					
#A6	a, c	<p>a) Is correct. Using a company’s own defect data to identify defect clusters is one aspect of root cause analysis. (see syllabus, section 1.5.3, 3rd section)</p> <p>b) Is not correct. Assessing a company’s or a project’s practices against a reference model follows a model-based test improvement approach (see syllabus, section 1.5.3)</p> <p>c) Is correct. Using metrics to quantify and assess a quality aspect of the test process (i.e., effectiveness) is one option for an analytical-based test process improvement. (see syllabus, section 1.5.3, list of examples)</p> <p>d) Is not correct. Deriving metrics with the GQM approach can be an option for analytical-based test process improvement, but in this scenario the goal of the measurement program does not address the problem of the project (see description of the exam question).</p> <p>e) Is not correct. Introduction of a new tool is a process improvement that can be part of a test process improvement plan (syllabus, section 1.5.3), but in this scenario this action is not supported by any data (see description of the exam question).</p>	TM-1.5.3	K2	1
Section: Test Tools					

#A7	b	<p>a) Is not correct. Personal preferences are not a valid consideration when selecting a tool.</p> <p>b) Is correct. That is a valid consideration when selecting a test tool from the stakeholder requirements part of the chapter.</p> <p>c) Is not correct. The design is not a valid consideration when selecting a tool.</p> <p>d) Is not correct. Financial aspects are a valid consideration of tool decisions, but there is no requirement given that says, 'You have to be cheaper when deciding on a new tool.'</p>	TM-1.6.2	K2	1
#A8	b	<p>a) Is not correct. Traceability is generally a valuable metric but you don't know yet if it's important for project management. You have to identify their requirements and needs first.</p> <p>b) Is correct. Metrics should always focus on the needs of the test team and the stakeholders, according to syllabus text,</p> <p>c) Is not correct. That approach may cover the needs of project management but is very inefficient.</p> <p>d) Is not correct. There are no specific requirements concerning acceptance criteria of defects of any priority or severity as described in the syllabus text.</p>	TM-1.6.5	K2	1

Section: Test Estimation					
#A9	b	<p>a) Is not correct. Test estimation in Agile projects is not done separately from development estimation, but rather as part of it. Test levels and activities are not the main drivers of test estimation in Agile projects, but rather the user stories and acceptance criteria.</p> <p>b) Is correct. Test estimation in Agile projects is done as part of development estimation and is based on the user stories and acceptance criteria. User stories are the main units of work in Agile projects and they define the features and functionalities that the customer wants. Acceptance criteria are the conditions that the user stories must meet to be considered done and acceptable. Test estimation in Agile projects is done by estimating the effort and time required to test the user stories and their acceptance criteria.</p> <p>c) Is not correct. Test estimation is not skipped in Agile projects and testing is not performed on an ad-hoc basis. Testing is an integral part of Agile projects and is done continuously throughout the development cycle. Test estimation is done to plan and allocate the testing resources and activities in an efficient and effective way.</p> <p>d) Is not correct. Test estimation is not done by the customer or the product owner, but rather by the development team. The customer or the product owner may provide the business value and risk of the features, but they are not responsible for estimating the testing effort and time. The development team, which includes the testers, is responsible for estimating the testing effort and time based on their skills, experience, and knowledge of the system.</p>	TM-2.2.1	K2	1

#A10a	a	<p>a) Is correct. This option will most likely influence the duration, but not the effort of the testing activities. The duration of testing depends on how long it takes to find and fix the defects, while the effort depends on how many resources are allocated to the testing process. If the time to repair defects is high, then the testing process will take longer, but it will not necessarily require more effort from the testers.</p> <p>b) Is not correct. This option will most likely influence both the duration and the effort of the testing activities. The maturity of the test process refers to how well-defined, standardized, and optimized the testing process is. A mature test process will usually result in shorter, more efficient testing. In contrast, an immature testing process will likely lead to longer and more costly testing. Therefore, this option affects both the duration and the effort of testing.</p> <p>c) Is not correct. This option will most likely influence both the duration and the effort of the testing activities. The level of detail of test conditions refers to how specific and comprehensive the test cases are. A higher level of detail will require more time and effort to design, execute, and evaluate the test cases, while a lower level of detail will result in less time and effort for testing. Therefore, this option affects both the duration and the effort of testing.</p> <p>d) Is not correct. This option will most likely influence both the duration and the effort of the testing activities. The required quality of the system refers to how high or low the quality standards are for the system under test. A higher quality requirement will demand more rigorous and extensive testing, while a lower quality requirement will allow for more relaxed and limited testing. Therefore, this option affects both the duration and the effort of testing.</p>	TM-2.2.2	K2	1
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#A10b	c	<p>e) Is not correct. The qualification (skills, experiences and knowledge) of the development team members should be taken into consideration for test estimation. (see syllabus text, section 2.2.1)</p> <p>f) Is not correct. Human skills and experiences of the developers should be taken into consideration for test estimation. (see syllabus text, section 2.2.1)</p> <p>g) Is correct. Future projects cannot not be taken into consideration; only past, completed projects and the historical data from similar projects can be considered.</p> <p>h) Is not correct. The determined hours measured as a result from test effort estimation could directly derive one part of the costs. (see syllabus text, section 2.2.1)</p>	TM-2.2.2	K2	1
Section: Test Team					
#A11	d	<p>a) Is not correct. Remuneration and salary are hygiene factors. They do not automatically lead to greater satisfaction. If missing, they can have a demotivating effect on the team members. (section 3.1.6, fourth paragraph, first bullet point)</p> <p>b) Is not correct. Micromanagement and over-regulated work instructions can have a demotivating effect on the team members. (section 3.1.6, fourth paragraph, second bullet point).</p> <p>c) Is not correct. Working conditions are hygiene factors. They do not automatically lead to greater satisfaction. If missing, they can have a demotivating effect on the team members. (section 3.1.6, fourth paragraph, third bullet point)</p> <p>d) Is correct. Recognition and appreciation for the work done is a factor that can motivate. (section 3.1.6, third paragraph, first bullet point)</p>	TM-3.1.6	K2	1

