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Foundation Level Sample Exam

SET B (v1.3.3) – GTB Edition

CTFL Syllabus Version v4.0

ISTQB® Certified Tester Foundation Level

Legal

ISTQB® Exam Working Group 2023

Acknowledgements

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Revision History

Version	Date	Remarks
1.3.1	30.06.2024	Initial GTB edition
1.3.1c	21.07.2024	Final GTB edition
1.3.2	20.11.2024	Correction Q4 (reason), Q6 (wording), Q20 (wording), Q21 (justificaton), Q23 (justification), Q24 (typo), Q30 (typo), Q36 (typo).
1.3.3	12.03.2025	Minor wording changes after Native speaker review and Q02 replaced acc. CTFL 4.0.2 (errata).

Introduction

This is a sample exam. It helps candidates to prepare for the actual certification exam. Questions are included whose structure, layout and format are like a regular ISTQB®/ GTB Certified Tester Foundation Level exam. It is strictly forbidden to use the exam questions as content of a certification exam.

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4) Exactly one correct solution is expected for almost every question. The exceptions explicitly mention the possibility of multiple answers.

Exam notes

Number of questions: 40

Duration of the exam: 60 minutes

Total score: 40 (one point per question)

Score to pass the exam: 26 (or more)

Percentage of passing the exam: 65 % (or more)

Feedback on this sample exam as a whole (40 questions) or on individual questions was provided in the German-language BETA versions of SET B in the period March - June 2024 by: Jörn Münzel, Stephan Weissleder, Horst Pohlmann, Marc-Florian Wendland, Ecaterina Irina Manole, Jessica Heymann (Sogeti), Jürgen Beniermann (Sogeti und GTB), Sabine Gschwandtner (imbus), Markus Thaler (Qytera), Sabine Gschwandtner (imbus), Daniel Moretz (WAMECON Academy), Sören Schmock (ITGAIN), Joachim Schulz (sepp.med), Arnd Prehl (imbus) und Paul Müller (Software Quality Lab).

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Question 1	FL-1.2.1	K2	Score 1.0

Which of the following best describes why testing is necessary in the software development lifecycle?

Please select ONE Option! (1 out of 4)

a)	Dynamic testing is the only way to evaluate the quality of a test object.	☐
b)	Testing ensures that users understand and comprehend the needs of the developers.	☐
c)	Testing is carried out exclusively to meet regulatory standards.	☐
d)	Testing helps identify defects, which improves the quality of the test object.	☒

FL-1.2.1 (K2) Exemplify, why testing is necessary [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.2.1):

a) FALSE – While dynamic testing is an important means of quality evaluation, it is not the only means. There are also other means such as code reviews and inspections.

b) FALSE – This statement does not make sense. Users do not need to be able to understand the needs of developers. Rather, testing ensures that the needs of users are taken into account during the development cycle (see Section 1.2.1, 3rd paragraph).

c) FALSE – Although testing can help meet regulatory requirements, the CTFL 4.0 syllabus highlights that testing also fulfills other important aspects, such as assessing quality and supporting release decision making in the SDLC.

d) CORRECT – The CTFL 4.0 syllabus explains that testing identifies defects that can be resolved by debugging, which implicitly contributes to a higher quality of the test object.

Question 2	FL-1.2.2	K1	Score 1.0

What is the difference between testing and quality assurance?

Please select ONE Option! (1 out of 4)

a)	Testing is a process-oriented, preventive approach, while quality assurance is a product-oriented, corrective approach.	☐
b)	Quality assurance is process-oriented and aims to improve the process, while testing aims for appropriate quality through product-oriented measures.	☒
c)	Testing and quality assurance are identical and can be used synonymously.	☐
d)	Quality assurance only refers to the test process, while testing encompasses the entire development process.	☐

FL-1.2.2. (K1) Recall the relation between testing and quality assurance [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.2.2):

a) FALSE – This statement is wrong because, according to the syllabus text, testing is described as a product-oriented, corrective approach that focuses on activities that support the achievement of an appropriate level of quality. In contrast, quality assurance is a process-oriented, preventive approach that focuses on implementing and improving processes (see CTFL syllabus V4.0, section 1.2.2, 2nd paragraph, 1st sentence).

b) CORRECT – This statement is correct and consistent with the syllabus text, which indicates that testing focuses on helping to achieve an adequate level of quality through product-oriented activities, while quality assurance is process-oriented and focuses on implementing and improving processes (see CTFL syllabus V4.0, section 1.2.2, 2nd paragraph).

c) FALSE – This statement is false because the syllabus text explicitly states that testing and quality assurance are not the same, even though the terms are often used synonymously. Testing is product- and defect-correction-oriented, while quality assurance is process-oriented and preventive (see CTFL syllabus V4.0, section 1.2.2, 1st paragraph).

d) FALSE – This statement is false because, according to the Syllabus text, quality assurance refers to both the development and test processes and is the responsibility of all project participants, while testing is a form of quality control that is product-oriented and corrective (see CTFL syllabus V4.0, section 1.2.2, 3rd paragraph, last sentence).

Question 3	FL-1.3.1	K2	Score 1.0

A tester has been testing software applications on mobile devices for a period of 5 years. Over this extended period, the tester has not modified the existing test cases or created any new test cases. With newer versions of the mobile platform, more failures have been reported by users. Which principle of testing did the tester not consider?

Please select ONE Option! (1 out of 4)

a)	Testing depends on the context	☐
b)	Complete testing is not possible	☐
c)	Tests wear out	☒
d)	Defects cluster together	☐

FL-1.3.1 (K2) Explain the seven testing principles [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) FALSE – Testing depends on the context, whether manual or automated (see [CTFL 4.0], Section 1.3; 6th principle). However, this does not change the fact that, as described above, fewer errors are being uncovered.

b) FALSE – Complete testing is, except in trivial cases, impossible, no matter how much effort is invested in testing (see [CTFL 4.0], Section 1.3; 2nd principle). However, this does not result in fewer errors being uncovered, as described above.

c) CORRECT – The principle "Tests wear out" (see [CTFL 4.0], Section 1.3, 5th principle) states that repeating unchanged tests becomes increasingly ineffective in finding defects ("Repetitions have no effectiveness"). To find new defects, existing tests and test data must be modified, and new tests must be created.

d) FALSE – In general, defects often occur in clusters in few components (see [CTFL 4.0], Section 1.3; 4th principle). However, this is not related to the fact that, as described above, fewer defects are being uncovered.

Question 4	FL-1.4.3	K2	Score 1.0

Consider the following test artifact:

Test Charter	#04.018	Session Duration: 1h
Explore	**the registration page**	
With	**various incorrect input sets**	
To discover	**Errors in the registration process with incorrect inputs**	

In which test activity is this test artifact created?

Please select ONE Option! (1 out of 4)

a)	Test Planning	☐
b)	Test Monitoring and Test Control	☐
c)	Test Analysis	☐
d)	Test Design	☒

FL-1.4.3 (K2) Differentiate the testware that supports the test activities [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.4.3):

a) FALSE – Test planning involves the creation or updating of a test concept. A test concept is a document that describes the scope, approach, resources, and schedule of planned test activities. A test charter is not a test concept but a more flexible and informal document that guides a testing session in exploratory testing (see [CTFL 4.0], Section 1.4.3).

b) FALSE – Test monitoring and control involve checking the status of test activities, identifying deviations from planned or expected results, and reporting on test progress and quality. A test charter is not a report or status update but a document that specifies what to investigate, how to investigate, and what to look for in exploratory testing (see [CTFL 4.0], Section 1.4.3).

c) FALSE – Test analysis involves analyzing the test basis (e.g., requirements, design, architecture, etc.) and defining what should be tested in the form of test conditions. A test condition is an element or event of a component or system that can be verified by one or more test cases. A test charter is not a list of test conditions but a document that defines the scope, objectives, and approach of a testing session for exploratory testing (see [CTFL 4.0], Section 1.4.3).

d) CORRECT – Test design is the derivation and specification of test cases from test conditions. A test case is a set of inputs, preconditions, actions (if applicable), expected results, and postconditions developed for a specific test objective or condition. A test charter is a form of test design that specifies what to test, how to test, and what to look for in exploratory testing (see ISTQB Foundation Level Syllabus 4.0). The above test artifact is a test charter. Test charters are the result of test development (see [CTFL 4.0], Section 1.4.3). Consequently, d) is CORRECT.

Question 5	FL-1.4.2	K2	Score 1.0

Which of the following will MOST likely impact how testing is performed for a given test object?

Please select ONE Option! (1 out of 4)

a)	The average level of experience of the organization's marketing team.	☐
b)	The knowledge of users that a new system is being developed for them.	☐
c)	The number of years of testing experience of the test team members.	☒
d)	The organizational structure of the users for the application to be developed.	☐

FL-1.4.2 (K2) Explain the impact of context on the test process [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.4.2):

a) FALSE – It is very unlikely that the average experience level of the marketing team (most of whom work in marketing) will have any influence on how the tests for a particular test object are conducted. Similarly, it is unlikely that the team will be involved in the test execution if it is an acceptance test. Marketing may exert influence through specific requirements from market needs and thus prioritize tests, but without any concrete influence on test execution (see [CTFL 4.0], section 1.4.2, 3rd bullet point).

b) FALSE – The level of knowledge of users that a new system is being built for them is unlikely to affect how testing is performed. Any user involvement that could affect how testing is performed is more likely to be as a result of decisions made by the testers, customer and project manager (see [CTFL 4.0], Section 1.4.2, 1st bullet point).

c) CORRECT – The number of years' experience of the members of the performance testing team will help to determine the capabilities and knowledge (e. g., of different tools and defect types) that the team members will apply when they are testing (see [CTFL 4.0], Section 1.4.2, 2nd bullet point).

d) FALSE – The organizational structure of the users of the system to be developed is rather unknown and will normally not affect the test execution. If a target organization is known, this may have an impact on a role model and thus on the requirements, but not directly on the test execution. One organization that does have an impact is the organization of the development and test team. However, this is not the content of the option (see [CTFL 4.0], section 1.4.2, 6th bullet point).

Question 6	FL-1.4.4	K2	Score 1.0

Consider the following testing activities:

1. **Selecting regression tests**
2. **Evaluating completeness of test execution**
3. **Identifying which user stories have open defect reports**
4. **Evaluating whether the number of tests for each requirement is consistent with the level of product risk**

Consider the following ways traceability can help testing:

A. Improve understandability of test status reports to include status of test basis items

B. Make testing activities auditable

C. Provide information to assess process quality

D. Analyze the impact of changes

Which of the following best matches the testing activity with how traceability can assist that activity?

Please select ONE Option! (1 out of 4)

a)	1D, 2B, 3C, 4A	☐
b)	1B, 2D, 3A, 4C	☐
c)	1D, 2C, 3A, 4B	☐
d)	1D, 2B, 3A, 4C	☒

FL-1.4.4 (K2) Explain the value of maintaining traceability.

Justification (see ISTQB® Foundation Level Syllabus v4.0):

Traceability assists with:

- Selecting regression tests in terms of analyzing the impact of changes (1D).
- Evaluating completeness of test execution which makes testing auditable (2B).
- Identifying which user stories have open defect reports which improves understandability of test status reports to include status of test basis items (3A).
- Evaluating whether the number of tests for each requirement is consistent with the level of product risk which provides information to assess test process quality (i.e., alignment of test effort with risk) (4C).

Thus:

a) FALSE

b) FALSE

c) FALSE

d) CORRECT

Question 7	FL-1.5.1	K2	Score 1.0

You are part of a test team involved in the development of a helicopter control system. Recently, an experienced helicopter pilot was hired as a tester for the test team.

What positive effects are the new tester's general competencies LIKELY to have on the test team?

Please select ONE Option! (1 out of 4)

a)	The application of 3-value boundary value analysis for a more thorough test design in system testing.	☐
b)	Inconsistencies and ambiguities in the technical requirements are effectively revealed.	☒
c)	The use of a tool for automating state-transition testing.	☐
d)	Test results are communicated more constructively and defensively to the developers.	☐

FL-1.5.1 (K2) Give examples of the generic skills required for testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.5.1):

a) FALSE – The ability to use test techniques such as the 3-value boundary value analysis belongs to the category of "test knowledge" (see first bullet point). It is not clear from the question that the new tester has dedicated test knowledge.

b) CORRECT – Domain knowledge that can be used to understand and communicate with end-users and business representatives is one of the generic skills required by testers. Domain knowledge that the new tester brings to the table according to the question is certainly helpful when it comes to effectively detecting inconsistencies and inaccuracies. This knowledge falls into the category "knowledge in the application domain" (see 6th bullet point) A tester with experience as a pilot is effective in reviewing requirements.

c) FALSE – The ability to use a tool for automated state-transition testing belongs to the category "test knowledge" (see first bullet point). It is not clear from the question that the new tester has dedicated test knowledge.

d) FALSE – A more constructive and defensive communication of test results belongs to the category "good communication skills" (see third bullet point). It is not clear from the question that the new tester has good communication skills.

Question 8	FL-1.5.2	K1	Score 1.0

Which of the following is an advantage of the whole-team approach?

Please select ONE Option! (1 out of 4)

a)	It allows team members to take on any role at any time.	☐
b)	Only one team is needed to support the entire development project.	☐
c)	Testers can work in isolation without distracting developers or business representatives with test-specific information.	☐
d)	It generates a team synergy that benefits the entire project.	☒

FL-1.5.2 (K1) Recall the advantages of the whole team approach [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 1.5.2):

a) FALSE – The whole-team approach is based on the idea of interdisciplinary teams (see [CTFL 4.0], Section 1.5.2, 2nd paragraph), i.e. if a team member is qualified for a task, he or she can take on it. However, this does not mean that a team member can take on any role at any time. As a rule, a person only takes on the role(s) of the role for which he or she is competent. Performing a task for which you are not suitable does not help the team and the project.

b) FALSE – The whole-team approach refers to the way a single team works (typically in agile software development) (see [CTFL 4.0], Section 1.5.2, 1st and 2nd paragraphs). The approach does not imply that only one team is needed for a complete project.

c) FALSE – The Whole Team approach is based on the idea of creating synergies between team members by sharing important information between members. This promotes cooperation and creates a common understanding. Testers should therefore definitely share test-specific information with team members (see [CTFL 4.0], Section 1.5.2, 3rd paragraph, last sentence).

d) CORRECT – By making the most of the different skills of each team member, the Whole-Team Approach fosters team dynamics, good communication and collaboration, and creates a team synergy that benefits the entire project (see [CTFL 4.0], Section 1.5.2, 2nd paragraph).

Question 9	FL-2.1.1	K2	Score 1.0

Which of the following statements about the choice of software development lifecycle and its relation to testing is CORRECT?

Please select ONE Option! (1 out of 4)

	If agile software development is used, system test automation replaces the need for regression testing.	☐
b)	If a sequential development model is used, then the dynamic testing is typically performed at a later stage in the lifecycle.	☒
c)	If an iterative development model is used, then component testing is typically performed manually by developers.	☐
d)	If an incremental development model is used, then static testing is carried out in early increments and dynamic testing in later increments.	☐

FL-2.1.1 (K2) Explain the impact of the chosen software development lifecycle on testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 2.1.1):

a) FALSE – In agile (iterative-incremental) software development, deliverables are produced in each iteration, and the frequent delivery of increments necessitates extensive regression testing, if possible at all test levels used. Although some (or all) of this regression testing may be automated, the regression testing (automated or not) cannot be replaced by system test automation. Comprehensive test automation of the regression tests facilitates the procedure. System and acceptance testing of new features tends to be experience-based and manual (see [CTFL 4.0], section 2.1.1, 3rd and 4th paragraphs). Therefore, only an automated system test is not the correct implementation of the agile software development model with regard to testing.

b) CORRECT – If a sequential development model is used, then early in the lifecycle no code is available for execution, and so during this time static testing (e.g., reviews) is performed. Later in the lifecycle, when code is available for execution, dynamic testing is possible (see [CTFL 4.0], section 2.1.1, 2nd paragraph). Note, however, that preparation for dynamic testing will often occur early in any software development lifecycle.

c) FALSE – If an iterative development model, like agile software development, is used, then component tests may well be used for regression testing for each iteration (see [CTFL 4.0], section 2.1.1, 3rd paragraph). Whether the component tests are then manual or automated or mixed (new plus regression tests) and carried out by developers or testers is a project-specific decision (cost-benefit, efficiency). This is not the influence of the software development model.

d) FALSE – In most incremental development models, executable and deliverable results are created in each increment, so that both static and dynamic tests make sense at all test levels for a created increment (see [CTFL 4.0], section 2.1.1, 3rd paragraph). The distribution of static tests to early increments and dynamic tests to late increments is therefore not correct.

Question 10	FL-2.1.2	K1	Score 1.0

Which of the following is a good testing practice that applies to all software development lifecycles?

Please select ONE BEST Option! (1 out of 4)

a)	Testers should review work products as part of the next development phase.	☐
b)	Testers should review work products of a software development activity as soon as drafts are available.	☒
c)	Testers should only review work products of a software development activity as part of the test analysis and test design activities.	☐
d)	Testers should review work products immediately after they are released for use.	☐

FL-2.1.2 (K1) Recall good testing practices that apply to all software development lifecycles [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 2.1.2):

a) FALSE – Testers should review work products as soon as drafts are available to enable early testing as part of a shift-left approach or 3rd principle of testing regardless of the SDLC chosen (see [CTFL 4.0], section 2.1.2, 4th bullet point, as well as sections 2.1.5 and 1.3). Waiting until the next development phase could lead to unnecessary error states in derived results and thus to unnecessary development (and test) work (see [CTFL 4.0], section 1.3).

b) CORRECT – Testers should review work products as soon as drafts are available to enable early testing as part of a shift-left approach regardless of the SDLC chosen and to avoid unnecessary follow-up failures (see [CTFL 4.0], section 2.1.2, 4th bullet point, as well as sections 2.1.5 and 1.3).

c) FALSE – Test analysis analyzes the test basis to identify testable features and determine the associated test conditions. The test design then includes the elaboration of the test conditions into test cases (see [CTFL 4.0], Section 1.4.1, 4th and 5th paragraphs). The verification of a work product, independent of the SDLC, serves quality control and so that all development activities are subject to quality control (see [CTFL 4.0], Section 2.1.2, 1st bullet point) and should therefore be carried out BEFORE test analysis starts. This is true regardless of the fact that test analysis and design should start in the same development phase to support the shift-left approach (see [CTFL 4.0], Section 2.1.2, 3rd bullet point).

d) FALSE – Testers should review work products as soon as drafts are available to allow early testing as part of a shift-left approach, regardless of the SDLC chosen (see [CTFL 4.0], section 2.1.2, 4th bullet point, and section 2.1.5). Waiting until release for use means that the defects found during the tester's review are still contained in the released work product and may lead to subsequent defects in development activities based on it and started in parallel.

Question 11	FL-2.1.3	K1	Score 1.0

Which of the following is an example of a test-first approach to development?

Please select ONE Option! (1 out of 4)

a)	Test-Driven Development	☒
b)	Coverage-Driven Development	☐
c)	Quality-Driven Development	☐
d)	Feature-Driven Development	☐

FL-2.1.3 (K1) Recall the examples of test-first approaches to development [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 2.3.1):

a) CORRECT – Test-Driven Development (TDD) is a well-known example of a test-first approach to development (see [CTFL 4.0], section 2.1.1, 2nd paragraph).

b) FALSE – Coverage-Driven Development is not an example of a test-first approach to development. Testing recognizes coverage (Glossary: The degree to which certain coverage elements have been executed by a test suite, expressed as a percentage) as an approach to determine a status. However, this has no relation to the point in time when testing takes place.

c) FALSE – Quality-Driven Development is not an example of a test-first approach to development. Every development should have a clear picture of which properties (quality characteristics) the target system should fulfill. However, this has no relation to the point in time when testing takes place.

d) FALSE – Feature-Driven Development is not an example of a test-first approach to development, but is, instead, an agile software development methodology based around delivering features (as opposed to user stories in Scrum).

Question 12	FL-2.1.4	K2	Score 1.0

Which of the following statements about DevOps is CORRECT?

Please select ONE Option! (1 out of 4)

a)	To speed up releases, continuous integration is used to encourage developers to submit code quickly without the need to complete component testing.	☐
b)	To be able to update and release systems faster, automated regression tests are required to reduce the danger of regression.	☒
c)	To treat both developers and operations equally, the testers will allocate more effort to release testing to operations by using a shift-right approach.	☐
d)	To create increased synergy between testers, developers and operations, the testing must become fully automated with no manual testing.	☐

FL-2.1.4 (K2) Summarize how DevOps might have an impact on testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 2.1.4):

a) FALSE – DevOps enables teams to create, test and release high-quality code faster through a DevOps delivery pipeline. But it also requires developers to deliver the associated unit tests: continuous integration (CI) promotes a shift-left approach to testing by encouraging developers to deliver high-quality code along with unit tests and static analysis (see [CTFL 4.0], section 2.1.4, 1st paragraph and 2nd bullet point).

b) CORRECT – DevOps improves testing in several ways through automation in the delivery chain that reduces the need for repetitive manual testing; by increasing the scope and range of automated regression testing, the risk of regression is minimized (see [CTFL 4.0], section 2.1.4, 5th and 6th bullet points).

c) FALSE – DevOps promotes a cultural shift within an organization to bridge the gap between development (including testing) and operations while treating their respective tasks equally (see [CTFL 4.0], section 2.1.4, 1st paragraph). However, this does not include a shift-right approach, but rather a shift-left approach (early testing) and also not by running the acceptance test in parallel with productive delivery. The acceptance test remains a prerequisite for productive release and delivery.

d) FALSE – Automated processes such as Continuous Integration/Continuous Delivery (CI/CD) in DevOps enable stable test environments and reduce the need for repetitive manual testing through automation (e.g. automated regression testing) (see [CTFL 4.0], section 2.1.4, 3rd, 5th and 6th bullet points). Although DevOps brings a high level of automated testing, manual testing is still required - especially from a user perspective (see [CTFL 4.0], section 2.1.4, last paragraph).

Question 13	FL-2.2.1	K2	Score 1.0

Which of the following is MOST likely to be performed as part of system testing?

Please select ONE Option! (1 out of 4)

a)	End-to-end security testing of a credit management system by an independent test team.	☒
b)	Testing the interaction of a currency exchange system with an external banking system or with the system of an external bank.	☐
c)	Beta testing of a learning system by trainers of training providers.	☐
d)	Testing the interactions between the user interface and database of a human resources system.	☐

FL-2.2.1 (K2) Distinguish the different test levels [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 2.2.1):

a) CORRECT – System testing examines the behavior and capabilities of the entire system and includes non-functional testing of quality characteristics, including IT security testing. System testing is often performed by an independent test team based on system specifications (see [CTFL 4.0], section 2.2.1, 3rd bullet point).

b) FALSE – This option describes a system integration test measure. This examines the interfaces to other systems and external services (see [CTFL 4.0], section 2.2.1, 4th bullet point).

c) FALSE – Beta testing may be performed as part of an acceptance test (see [CTFL 4.0], section 2.2.1, 5th bullet point). The beta test is a type of acceptance test that is performed at a location external to the developer's test environment by parties outside the vendor organization (see glossary).

d) FALSE – This option describes a component integration test measure. Component integration testing tests the interfaces and interactions between the components of a system, e.g. between the user interface and the database (see [CTFL 4.0], section 2.2.1, 2nd bullet point).

Question 14	FL-2.3.1	K2	Score 1.0

Which of the following decisions should NOT trigger maintenance testing?

Please select ONE Option! (1 out of 4)

a)	The decision to test the maintainability of the software.	☒
b)	The decision to test the system after migrating to a new operating platform.	☐
c)	The decision to test the recoverability of archived data after decommissioning.	☐
d)	The decision to test after applying a "hotfix" to the production version.	☐

FL-2.3.1 (K2) Summarize maintenance testing and its triggers [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) CORRECT – Maintainability is a quality attribute that does not depend on code execution ([CTFL 4.0], Section 3.1.3, 1st paragraph, 5th bullet point). Therefore, it is NOT a trigger for maintenance testing, which is performed as dynamic testing in response to changes in the code or environment (see [CTFL 4.0], Section 2.3, 3rd paragraph including bullet points).

b) FALSE – This is a trigger for maintenance testing (see [CTFL 4.0], Section 2.3, 3rd paragraph, 2nd bullet point). After a platform migration, it is important to verify the functionality and interoperability of the software.

c) FALSE – This is a trigger for maintenance testing (see [CTFL 4.0], Section 2.3, 3rd paragraph, 3rd bullet point). It is relevant to ensure that archived data can be properly restored.

d) FALSE – This is a trigger for maintenance testing (see [CTFL 4.0], Section 2.3, 3rd paragraph, 1st bullet point). After a hotfix, it is important to verify the impact on existing functionality.

Question 15	FL-3.1.2	K2	Score 1.0

Which of the following statements BEST describes the use of static testing?

Please select ONE Option! (1 out of 4)

a)	Static testing can uncover defects that cannot be found by dynamic tests.	☒
b)	Defects in the code can be more efficiently found by dynamic tests than by static tests.	☐
c)	Static testing can only be performed in a late phase of the SDLC.	☐
d)	To make static testing as efficient as possible, as few stakeholders as possible should be involved.	☐

FL-3.1.2 (K2) Explain the value of static testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) CORRECT – because there are defects that can only be detected through static tests (see [CTFL 4.0], Section 3.1.2, 1st paragraph, last sentence).

b) FALSE – Static tests can uncover defects more efficiently, i.e., earlier and usually with fewer resources, than dynamic tests (see [CTFL 4.0], Section 3.1.2, 4th paragraph, 1st sentence).

c) FALSE – Static testing can be employed in the early phases of the SDLC (see [CTFL 4.0], Section 3.1.2, 2nd paragraph, 3rd sentence).

d) FALSE – One advantage of static tests, especially reviews, is the improvement of communication and mutual understanding among stakeholders. Therefore, a large number of stakeholders should be involved in static tests (see [CTFL 4.0], Section 3.1.2, 2nd paragraph, last sentence).

Question 16	FL-3.2.1	K1	Score 1.0

Which of the following is a benefit of early and frequent stakeholder feedback?

Please select ONE Option! (1 out of 4)

a)	Managers are aware of which developers are less productive at an early stage.	☐
b)	It allows project managers to reduce their stakeholder interactions.	☐
c)	It facilitates early communication of potential quality issues.	☒
d)	End users better understand why the deployment of the application is delayed.	☐

FL-3.2.1 (K1) Identify the benefits of early and frequent stakeholder feedback [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 3.2.1):

Early and frequent feedback from stakeholders is used for communication to prevent misunderstandings about requirements and to eliminate potential problems (see [CTFL 4.0], section 3.2.1, 1st and 2nd paragraphs). Therefore:

a) FALSE – It is not about evaluating people and their performance.

b) FALSE – A reduction of interactions by the project manager will not be an advantage, as important feedback may be lost or come too late (see [CTFL 4.0], section 3.2.1, 1st and 2nd paragraphs).

c) CORRECT – Obtaining early and frequent feedback from those involved in the software development process can be very beneficial because it facilitates early communication of potential quality issues, helps avoid misunderstandings about requirements, and ensures that changes to stakeholders' requirements are understood and implemented more quickly (see [CTFL 4.0], section 3.2.1, 1st and 2nd paragraphs).

d) FALSE – It is a potential benefit of feedback and communication to avoid scheduling problems rather than to justify them, e.g. by clarifying requirements or prioritizing requests (see [CTFL 4.0], section 3.2.1, 1st paragraph).

Question 17	FL-3.2.2	K2	Score 1.0

Given the following task descriptions from the review process:

1. **The quality characteristics to be evaluated and the exit criteria are defined.**
2. **Everyone has access to the work product.**
3. **Anomalies are identified in the work product.**
4. **Anomalies are analyzed and discussed.**

And the following review activities:

A. **Individual review**

B. **Review initiation**

C. **Planning**

D. **Communication and analysis**

Which assignment of task to activity is CORRECT?

Please select ONE Option! (1 out of 4)

a)	1B, 2C, 3D, 4A	☐
b)	1B, 2D, 3C, 4A	☐
c)	1C, 2A, 3B, 4D	☐
d)	1C, 2B, 3A, 4D	☒

FL-3.2.2 (K2) Summarize the activities of the review process [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 3.2.2):

Considering each of the listed task descriptions:

1. The quality characteristics to be evaluated and the exit criteria are selected - (Planning (C): Defining the review scope, purpose, work product to be reviewed, **quality characteristics to be evaluated**, areas of focus, **exit criteria**, supporting information such as standards, effort, and timeframes.) (see [CTFL 4.0], section 3.2.2, 1st bullet point).

2. Everyone has access to the work product - (Review initiation (B): Ensuring all **participants have access to the work product** and necessary resources, and clarifying their roles and responsibilities, and receives everything they need to conduct the review (see [CTFL 4.0], section 3.2.2, 2nd bullet point).)

3. Anomalies are identified in the work product - (Individual review (A): Evaluating the work product's quality, **identifying** and logging **anomalies**, recommendations, and questions using review techniques like checklist-based and scenario-based reviewing.) (see [CTFL 4.0], section 3.2.2, 3rd bullet point).

4. Anomalies are analyzed and discussed - (Communication and analysis (D): **Analyzing and discussing each anomaly**, determining its status, ownership, and required actions, and making review decisions, normally in a meeting. This could include determining the need for a follow-up review.) (see [CTFL 4.0], section 3.2.2, 4th bullet point).

Thus:

a) FALSE

b) FALSE

c) FALSE

d) CORRECT – The correct match is: 1C, 2B, 3A, 4D

Question 18	FL-3.2.3	K1	Score 1.0

The generic review process recognizes the following roles, among others:

1. **Scribe**
2. **Review leader**
3. **Facilitator**
4. **Manager**

In the context of reviews, these roles can take on the following responsibilities:

A. Ensures the effective running of review meetings and the setting up of a safe review environment

B. Records review information, such as decisions and new anomalies found during the review meeting

C. Decides what is to be reviewed and provides resources, such as staff and time for the review

D. Takes overall responsibility for the review such as organizing when and where the review will take place

Which of the following assignments of roles to responsibilities is correct?

Please select ONE Option! (1 out of 4)

a)	1A, 2B, 3D, 4C	☐
b)	1A, 2C, 3B, 4D	☐
c)	1B, 2D, 3A, 4C	☒
d)	1B, 2D, 3C, 4A	☐

FL-3.2.3 (K1) Recall which responsibilities are assigned to the principal roles when performing reviews [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 3.2.3):

Considering each of the listed roles:

1. Scribe (or Recorder) – responsible for gathering feedback from reviewers and documenting review information, such as decisions made, and any new anomalies identified during the review meeting. (Records review information, such as decisions and new anomalies found during the review meeting - B) (see [CTFL 4.0], section 3.2.3, 4th bullet point).

2. Review Leader – responsible for overseeing the review process, such as selecting the review team members, scheduling review meetings, and ensuring that the review is completed successfully. (Takes overall responsibility for the review such as organizing when and where the review will take place - D) (see [CTFL 4.0], section 3.2.3, 6th bullet point).

3. Facilitator (or Moderator) – responsible for ensuring that the review meetings run effectively, including managing time, mediating discussions, and creating a safe environment where everyone can voice their opinions freely. (Ensures the effective running of review meetings and the setting up of a safe review environment - A) (see [CTFL 4.0], section 3.2.3, 3rd bullet point).

4. Manager – responsible for deciding what needs to be reviewed and allocating resources, such as staff and time, for the review. (Decides what is to be reviewed and provides resources, such as staff and time for the review - C) (see [CTFL 4.0], section 3.2.3, 1st bullet point).

Thus:

a) FALSE

b) FALSE

c) CORRECT – The correct match is: 1B, 2D, 3A, 4C

d) FALSE

Question 19	FL-4.1.1	K2	Score 1.0

Which of the following statements BEST describes the difference between decision table testing and branch testing?

Please select ONE Option! (1 out of 4)

a)	In decision table testing, the test cases are derived from the decision statements in the code. In branch testing, the test cases are derived from knowledge of the control flow of the test object.	☐
b)	In decision table testing, the test cases are derived from the specification that describes the business logic. In branch testing the test cases are based on anticipation of potential defects in the source code.	☐
c)	In decision table testing, the test cases are derived from knowledge of the control flow of the test object. In branch testing, test cases are derived from the specification that describes the business logic.	☐
d)	In decision table testing, the test cases are independent of how the software is implemented. In branch testing, test cases can be created only after the design or implementation of the code.	☒

FL-4.1.1 (K2) Distinguish black-box, white-box and experience-based test techniques [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.1.1):

Basics:

- **Black box test techniques** (also known as specification-based test techniques) are based on an analysis of the specified behavior of the test object without knowledge of the internal structure. The test cases are therefore created independently of the implementation of the software.
- **White-box test techniques** (also known as structure-based techniques) are based on an analysis of the internal structure and processing of the test object. As the test cases are dependent on the design of the software, they can only be created after the design or implementation of the test object.
- **Experience-based testing methods** effectively use the knowledge and experience of testers to design and implement test cases.
- The **decision table test** belongs to the black box test techniques (see [CTFL 4.0], section 4.2.3).
- The **branch test** belongs to the white-box test techniques (see [CTFL 4.0], section 4.3.2).

a) FALSE – Decision table testing is a black-box test technique, so it is specification-based, not structure-based – the test cases are NOT based on the decisions in the source code. In branch testing, the test cases are derived from knowledge of the control flow of the test object. This statement is basically correct.

b) FALSE – In decision table testing, the test cases are derived from the specification that describes the business logic. This statement is basically correct. The anticipation of potential defects is used in error guessing (an experience-based test approach) and not in branch testing (a structure-based test techniques). This statement is therefore not correct.

c) FALSE – If a test case is based on knowledge of the control flow of the test object, it is a white-box test procedure. The testing of decision tables is usually based on an analysis of the business logic and is a black-box test procedure. This statement is therefore incorrect. In branch testing, test cases are not derived from the specification - this would belong to a black-box test procedure. This statement is therefore not correct.

d) CORRECT – Decision table testing is a black-box test technique, so it is based on an analysis of the specified behavior of the test object without reference to its internal structure. Therefore, the test cases are independent of how the software is implemented. Branch testing is a white-box test technique, so test cases are based on an analysis of the test object's internal structure and processing. As the test cases are dependent on how the software is designed and coded, they can only be created after the design or implementation of the test object.

Question 20	FL-4.2.1	K3	Score 1.0

Customers of the TestWash car wash chain have loyalty cards with a record of the number of previously purchased washes. The initial value is 0. After entering the car wash, the system increases the number on the card by one. This value represents the number of the current wash. The system decides what level of discount the customer is entitled to based on this number.

For every tenth wash, the system gives a 10 % discount, and for every twentieth wash, the system gives a further 40 % discount (i.e., a 50 % discount in total).

Which of the following sets of input data (understood as the number of the current wash) achieves the highest equivalence partition coverage?

Please select ONE Option! (1 out of 4)

a)	19, 20, 30	☒
b)	11, 12, 20	☐
c)	1, 10, 50	☐
d)	10, 29, 30, 31	☐

FL-4.2.1 (K3) Use equivalence partitioning to derive test cases [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.2.1):

a) CORRECT – 19 covers the “no discount” partition, 20 covers the “50 % discount” partition, and 30 covers the “10 % discount” partition. These three values cover all three of the valid equivalence partitions.

b) FALSE – 11 and 12 cover the “no discount” partition, while 20 covers the “50 % discount” partition. The "10 % discount" equivalence class is not covered. So covering two of the three valid equivalence partitions.

c) FALSE – 1 covers the “no discount” partition, while 10 and 50 cover the “10 % discount” partition. The “50 % discount” partition is not covered, so overall two of the three valid equivalence partitions are covered.

FALSE – 29 and 31 cover the “no discount” partition, while 10 and 30 cover the “10 % discount” partition. The “50 % discount” partition is not covered, so overall two of the three valid equivalence partitions are covered.

Question 21	FL-4.2.2	K3	Score 1.0

A wine storage system uses a control device to measure the temperature (T) of the wine cellar (measured in °C, rounded to the nearest degree) and alerts the user if the optimal temperature is exceeded or not met:

- **If 11 <= T <= 13, the system reports: "optimal temperature"**
- **If T < 11, the system reports: "The temperature is too low!"**
- **If T > 13, the system reports: "The temperature is too high!"**

You apply the 3-value boundary value analysis to verify the expected behavior of the controller. The test input is a temperature provided by the device in °C.

Which test inputs achieve 100 % coverage?

Please select ONE Option! (1 out of 4)

a)	11, 12, 13	☐
b)	9, 13, 15	☐
c)	9, 10, 11, 12, 13, 14, 15	☒
d)	10, 11, 12, 13, 14	☐

FL-4.2.2 (K3) Use boundary value analysis to derive test cases [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0, Section 4.2.2):

There are three equivalence classes: EC1: {..., 9, 10}, EC2: {11 ... 13}, and EC3: {14, 15 ...}.

To achieve 100 % coverage in the 3-value boundary value analysis, all coverage elements must be tested, including the identified boundary values and their neighbors (see [CTFL 4.0]).

The boundary values are 10, 11, 13, and 14 (excluding negative values and values outside the range boundary). In the 3-value boundary value analysis, we must now use the boundary values and their two neighbors:

- 10: 9, 10, 11
- 11: 10,11,12
- 13: 12,13,14
- 14: 13,14, 15

(The special feature here is that the values 11 and 13 are the upper and lower limit for the neighbor. These values must therefore only be used once in a test case, so answer c.) is correct.)

a) FALSE – This would correspond to the 3-value boundary value analysis for EC2.

b) FALSE – This would correspond to a pure equivalence class partitioning, as only one value from the respective equivalence class is used.

c) CORRECT – This corresponds to the identified values for the 3-value boundary value analysis.

d) FALSE – This corresponds to the 2-value boundary value analysis for all equivalence classes.

Question 22	FL-4.2.3	K3	Score 1.0

The following decision table contains the rules for determining the risk of atherosclerosis based on the measured value of cholesterol and the patient's blood pressure.

	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5
Conditions					
Cholesterol (mg/dl)	**≤124**	**≤ 124**	**125 – 200**	**125 – 200**	**≥ 201**
Blood pressure (mm Hg)	**≤ 140**	**> 140**	**≤ 140**	**> 140**	**–**
Action					
Risk level	**very low**	**low**	**medium**	**high**	**very high**

You designed the test cases with the following test input data:

TC1: Cholesterol = 125 mg/dl Blood pressure = 141 mm Hg

TC2: Cholesterol = 200 mg/dl Blood pressure = 201 mm Hg

TC3: Cholesterol = 124 mg/dl Blood pressure = 201 mm Hg

TC4: Cholesterol = 109 mg/dl Blood pressure = 200 mm Hg

TC5: Cholesterol = 201 mg/dl Blood pressure = 140 mm Hg

What is the decision table coverage achieved by these test cases?

Please select ONE Option! (1 out of 4)

a)	40 %	☐
b)	60 %	☒
c)	80 %	☐
d)	100 %	☐

FL-4.2.3 (K3) Use decision table testing to derive test cases [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.2.3):

There are five columns in the decision table. Each test case covers one of them.

TC1 and TC2 both cover Rule 4
TC3 and TC4 both cover Rule 2
TC5 covers Rule 5

So, these five test cases cover three out of five columns, achieving a coverage of (3/5)*100 % = 60 % (see [CTFL 4.0], section 4.2.3, 5th paragraph).

Therefore, option b) is the CORRECT option.

Thus:

a) FALSE

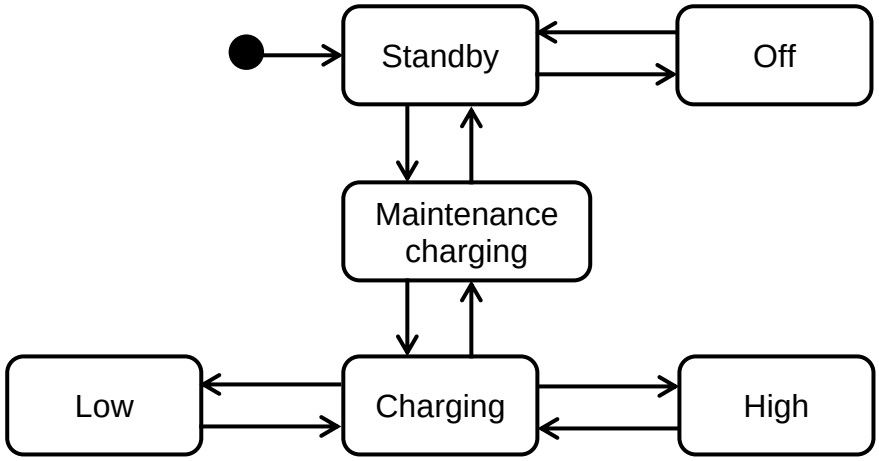
b) CORRECT

c) FALSE

d) FALSE

Question 23	FL-4.2.4	K3	Score 1.0

Given the following state transition diagram for the software of a battery charger:



Which of the following test cases includes both valid and invalid transitions?

Please select ONE Option! (1 out of 4)

a)	Start → Standby → Off → Standby → Maintenance charging → Standby	☐
b)	Start → Standby → Maintenance charging → Charging → High → Charging	☐
c)	Start → Standby → Maintenance charging → Charging → Low → Charging	☐
d)	Start → Standby → Off → Standby → Charging → Low → Charging	☒

FL-4.2.4 (K3) Use state transition testing to derive test cases [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

The state transition diagram shows 10 valid transitions. The transition from "Off" to "High," executed by test case D, is not included in the state diagram and is therefore an invalid transition (see [CTFL 4.0], Section 4.2.4):

a) FALSE – This test case only executes valid transitions as it traverses the states according to the diagram.

b) FALSE – This test case only executes valid transitions as it traverses the states according to the diagram.

c) FALSE – This test case only executes valid transitions as it traverses the states according to the diagram.

d) CORRECT – In this test case, the invalid transition from "Standby" to "Charging" is executed.

Therefore, test case d) is the one that includes an invalid transition alongside valid transitions.

Question 24	FL-4.3.1	K2	Score 1.0

You run two test cases, T1 and T2, on the same code. Test T1 achieved 40 % statement coverage and test T2 achieved 65 % statement coverage.

Based on the information above, which of the following sentences must be true?

Please select ONE Option! (1 out of 4)

a)	The test suite composed with tests T1 and T2 achieves 105 % statement coverage.	☐
b)	There exists at least one statement that must have been executed by both T1 and T2.	☒
c)	At least 5 % of the statements in the code under test are non-executable.	☐
d)	The test suite composed of tests T1 and T2 achieves full branch coverage.	☐

FL-4.3.1 (K2) Explain statement testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.3.1):

a) FALSE – Coverage is always defined as the percentage of the covered elements. Therefore, it cannot exceed 100 % (see [CTFL 4.0], section 4.3.1, 1st paragraph).

b) CORRECT – If the statements executed by T1 and T2 were disjoint, the coverage of the test suite {T1, T2} would be 105 %, which is impossible (see answer a). Therefore, at least 5 % of executable statements must have been executed by both T1 and T2.

c) FALSE – Statement coverage does not tell us anything about the number of non-executable statements in the code, because it only shows the instructions that have been executed so far. Whether code that has not yet been executed is inaccessible and therefore non-executable code can only be determined through analysis.

d) FALSE – Even, if a test suite achieves 100 % statement coverage, this does not automatically mean that 100 % branch coverage has been achieved. A measurement of the branch coverage is necessary for this (see [CTFL 4.0], section 4.3.1, 2nd paragraph and section 4.3.2, 4th paragraph).

Question 25	FL-4.3.2	K2	Score 1.0

Let the branch coverage metric be defined as BCov = (X / Y) * 100 %.

What do X and Y represent in this formula?

Please select ONE Option! (1 out of 4)

a)	X = number of decision outcomes exercised by the test cases Y = total number of decision outcomes in the code	☐
b)	X = number of conditional branches exercised by the test cases Y = total number of branches in the code	☐
c)	X = number of branches exercised by the test cases Y = total number of branches in the code	☒
d)	X = number of conditional branches exercised by the test cases Y = total number of decision outcomes in the code	☐

FL-4.3.2 (K2) Explain branch testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.3.2):

Branch testing is a white-box test technique in which the coverage items are branches. A branch is a transfer of control between two nodes in the control flow graph, which shows the possible sequences in which source code statements are executed in the test object. Each transfer of control can be either unconditional (i.e., straight-line code) or conditional (i.e., a decision outcome). Coverage is measured as the number of branches exercised by the test cases divided by the total number of branches, and is expressed as a percentage.

Thus:

a) FALSE – A decision outcome is a conditional branch. For branch testing, X counts not only conditional, but also unconditional branches. Therefore, the statement about X is not correct, the unconditional branches are missing. The same applies to the statement for Y.

b) FALSE – Branch coverage counts not only conditional, but also unconditional branches.

c) CORRECT – Branch coverage is measured as the number of branches exercised by the test cases divided by the total number of branches, and is expressed as a percentage BCov = (X / Y) * 100 %

d) FALSE – Both X and Y count only conditional branches and do not take into account the unconditional branches (see a)).

Question 26	FL-4.4.2	K2	Score 1.0

Which of the following statements provides the BEST justification for using exploratory testing?

Please select ONE Option! (1 out of 4)

a)	The existing test strategy requires that testers use black-box test techniques.	☐
b)	The specification is written in a formal language that can be processed by a tool.	☐
c)	The Testers are the members of an agile team and have good programming skills.	☐
d)	The Testers are experienced in the business domain and have good analytical skills.	☒

FL-4.4.2 (K2) Explain exploratory testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.4.2):

Exploratory testing is useful when there are few or inadequate specifications or there is significant time pressure on the testing. Exploratory testing is also useful to complement other more formal test techniques. Exploratory testing will be more effective if the tester is experienced, has domain knowledge and has a high degree of essential skills, like analytical skills, curiosity and creativeness.

Thus:

a) FALSE – Exploratory testing is not a black-box test technique therefore the statement has no relation to a justification of an exploratory test.

b) FALSE – Exploratory testing is useful when the specifications are poorly written. A formally described specification that can be processed by tools justifies the use of a static analysis and automated tests rather than the use of exploratory tests.

c) FALSE – Agile teams and agile development can use exploratory testing for new features, but programming skills have nothing to do with exploratory testing or do not support efficient implementation. Therefore, this is not a justification.

d) CORRECT – Exploratory testing will be more effective if the tester is experienced, has domain knowledge and has a high degree of essential skills, like analytical skills, curiosity and creativeness.

Question 27	FL-4.4.3	K2	Score 1.0

Which of the following is the BEST example of a test condition when using checklist-based testing?

Please select ONE Option! (1 out of 4)

a)	"The developer made an error when implementing the code."	☐
b)	"The achieved statement coverage exceeds 85 %."	☐
c)	"The program works correctly regarding functional and non-functional requirements."	☐
d)	"The error messages are written in language that the user can understand."	☒

FL-4.4.3 (K2) Explain checklist-based testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.4.3):

a) FALSE – Checklists should contain test conditions to be tested and not general assumptions. The fact that developers make mistakes can be an experience. In order to turn this into one or more elements as test conditions for a checklist, this experience should be concretized: which incorrect actions happen frequently and which defects or which defects can be derived as test conditions (see [CTFL 4.0], section 4.4.3, 1st paragraph).

b) FALSE – Checklists should not contain items that are better suited as exit criteria. This is an example of an exit criterion (see [CTFL 4.0], section 4.4.3, 1st paragraph).

c) FALSE – Checklists should not contain items that are too general. This is a very general item, which practically describes the goal of testing and not a specific test condition. It should be possible to test each element individually and directly (see [CTFL 4.0], section 4.4.3, 2nd paragraph).

d) CORRECT – This is an example of a test condition that can be checked by a human based on their knowledge and experience of what is important to the user (see [CTFL 4.0], section 4.4.3, 1st paragraph).

Question 28	FL-4.5.2	K2	Score 1.0

Consider the following acceptance criteria for a user story written from the perspective of an online store owner.

Given that the user is logged in and on the homepage:

When the user clicks on the "Add Item" button,

Then the "Create Item" form should appear,

And the user should be able to input a name and price for the new item.

In what format is this acceptance criteria written?

Please select ONE Option! (1 out of 4)

a)	Rule-oriented	☐
b)	Scenario-oriented	☒
c)	Product-oriented	☐
d)	Process-oriented	☐

FL-4.5.2 (K2) Classify the different options for writing acceptance criteria [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 4.5.2):

a) FALSE – The rule-oriented format includes formats like bullet point verification lists or tabulated forms of input-output mappings, explicitly showing the rules to be followed (see [CTFL 4.0], section 4.5.2, 3rd paragraph, 2nd bullet point). Given/When/Then is a scenario-oriented format because it describes a scenario to be verified.

b) CORRECT – The acceptance criterion uses the given/if/then format, which is scenario-oriented (see [CTFL 4.0], section 4.5.2, 3rd paragraph, 1st bullet point).

c) FALSE – There is no "product-oriented" format of acceptance criteria that is universally defined.

d) FALSE – There is no "process-oriented" format of acceptance criteria that is universally defined.

Question 29	FL-4.5.3	K3	Score 1.0

Please consider the following User Story:

"As a coach of a football team, I want to be able to retrieve the eligibility list for a match day in DFBNET so that I can assign the squad for the next match day."

Which test case is BEST suited for acceptance test-driven development of the User Story?

Please select ONE Option! (1 out of 4)

a)	Login as a coach into DFBNET; select the upcoming match days for my team; download the eligibility lists.	☐
b)	GIVEN: I am logged in as a coach in DFBNET with my coach ID AND GIVEN: I have selected the next match day, WHEN I select "load eligibility list", THEN a list of eligible players for the next match day is displayed to me	☒
c)	Login as team manager; select the next match day; load eligibility list; remove players who are not eligible to play.	☐
d)	GIVEN: I have selected the next match days for my team WHEN I select a match day AND WHEN I load the eligibility list for this match day, THEN all eligible players for this match day should be displayed to me.	☐

FL-4.5.3 (K3) Use acceptance test-driven development (ATDD) to derive test cases [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) FALSE – NOT SUITABLE - because the User Story will not be accurately represented. In this test case, a list of match days is retrieved, and for each of these match days, the eligibility lists are loaded. However, this is not required or specified in the User Story. The User Story only demands the eligibility list for one match day to be loaded.

b) CORRECT – MOST SUITABLE - In this test case, after logging in as a coach, the eligibility list for the next match day is loaded and displayed. This aligns with the specification of the User Story. This option is the most suitable as it clearly defines the specific steps for accepting the functionality and integrates the acceptance criteria directly into the test case.

c) FALSE – NOT SUITABLE - The User Story clearly specifies that the coach wants to view the eligibility list for one match day to assemble their team. There is no mention of a team manager.

d) FALSE – NOT SUITABLE - While this test case appropriately tests the functionality specified in the User Story, it does not consider that the user is logged in as a coach in the DFBNET. Since the requested functionality is explicitly tailored to the role of the coach, this test case is not the best suited for accepting the User Story.

Question 30	FL-5.1.3	K2	Score 1.0

Your team follows the process, which uses a continuous integration and delivery (CI/CD) pipeline with a shift-left approach. The first three steps in this process are:

(1) Develop and deploy code

(2) Submit code into a version control system and merge it into the "test" branch

(3) Perform component testing for the submitted code

Which of the following criteria is BEST suited as an entry criterion for step (2) of this pipeline?

Please select ONE Option! (1 out of 4)

a)	The Static analysis does not report any defect or no high severity warnings for the submitted code.	☒
b)	The Version control does not report any conflicts when compiling and integrating the code into the "test" branch.	☐
c)	The Component tests are compiled and ready to run in the "Test" branch.	☐
d)	The Statement coverage of the component test is at least 80 %.	☐

FL-5.1.3 (K2) Compare and contrast entry criteria and exit criteria [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.1.3):

a) CORRECT – The CI-CD approach together with the shift-left approach promotes early testing so that developers are encouraged to deliver their high-quality code together with the unit tests and static analysis (see [CTFL 4.0], section 2.1.4 and 2.1.5). Therefore, the results of the static analysis are a useful and measurable input criterion before integrating the code into the CI-CD pipeline, comparable to a smoke test (see [CTFL 4.0], section 5.1.3, 2nd paragraph).

b) FALSE – This is something that can be checked *after* step (2) is performed, because merge conflict reporting can be done *after* the code is submitted and merged.

c) FALSE – This fits better as the entry criterion for step (3), as it has no relevance for step (2).

d) FALSE – This fits better as the exit criterion for step (3).

Question 31	FL-5.1.4	K3	Score 1.0

You want to estimate the test effort for a new project using estimation based on ratios. You calculate the test-to-development effort ratio using averaged data for both the development and test efforts from four historical projects similar to the new one. The table below shows this historical data.

Project	Development effort ($)	Test effort ($)
P1	800,000	40,000
P2	1,200,000	130,000
P3	600,000	70,000
P4	1,000,000	120,000

The estimated development effort for the new project is $800,000. What is your estimate of the test effort in this project?

Please select ONE Option! (1 out of 4)

a)	$40,000	☐
b)	$80,000	☒
c)	$81,250	☐
d)	$82,500	☐

FL-5.1.4 (K3) Use estimation techniques to calculate the required test effort [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.1.4):

The estimation method used is based on ratios derived from the average values of historical and similar projects as key figures (see [CTFL 4.0], section 5.1.4, 3rd paragraph).

The average development effort is $900,000 and the average test effort is $90,000 (calculated from the four projects).

The average test-to-development effort ratio is 1:10 ($90,000 : $900,000), which means that historically, on average, the test effort is 10 % of the development effort.

So if the development effort is estimated to be $800,000, the estimated test effort is estimated as:

10 % * $800,000 = 0.1 * $800,000 = $80,000.

Thus:

a) FALSE

b) CORRECT

c) FALSE

d) FALSE

Question 32	FL-5.1.5	K3	Score 1.0

You have been asked to establish an optimal, risk-based execution sequence for the following test cases, which have already been prioritized and examined for any dependencies:

Test case-ID	Priority	Dependent on
T1	3	-
T2	1	T1
T3	3	T2
T4	3	T2
T5	1	T3
T6	2	T4

Priority 1 is more urgent than Priority 2, and so forth.

Which of the following test sequences takes into account the dependencies and priorities mentioned above?

Please select ONE Option! (1 out of 4)

a)	T1 → T2 → T4 → T5 → T3 → T6	☐
b)	T1 → T2→ T3 → T4 → T5 → T6	☐
c)	T1 → T2 → T4 → T3 → T5 → T6	☐
d)	T1 → T2 → T3 → T5 → T4 → T6	☒

FL-5.1.5 (K3) Apply test case prioritization [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) FALSE – T5 depends on T3, meaning that T3 must be executed before T5.

b) FALSE – T5 is more urgent than T4, so after the execution of T3, T5 should be executed next.

c) FALSE – T5 is more urgent than T4, so T4 should be executed after T3 and T5, not before.

d) CORRECT – This test execution plan correctly considers dependencies and priorities. The test case with the highest priority (T5) requires T3. Consequently, T3 is executed earlier than the equally prioritized test case T4. T4 is executed after T5, so that T6 can be executed conclusively.

Question 33	FL-5.1.7	K2	Score 1.0

According to the testing quadrants model, which of the following items is assigned to quadrant Q1 ("technology facing" and "support the team")?

Please select ONE Option! (1 out of 4)

a)	Usability testing	☐
b)	Smoke tests	☐
c)	User acceptance testing	☐
d)	Component integration tests	☒

FL-5.1.7 (K2) Summarize the testing quadrants and their relationships with test levels and test types [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.1.7):

a) FALSE – Usability testing is business-oriented tests that criticize the product (Q3).

b) FALSE – Smoke tests are tests that take a critical look at the product (Q4).

c) FALSE – User acceptance testing is business-oriented tests that criticize the product (Q3).

d) CORRECT – Component integration testing is technology facing testing that supports the team (guides the development) (Q1).

Question 34	FL-5.2.4	K2	Score 1.0

In the context of risk management, identify the statement that NOT accurately depict the relationship between product risk and test planning?

Please select ONE Option! (1 out of 4)

a)	The potential impact of IT security vulnerabilities was evaluated as significantly high, leading to an increase in the exit criterion for the IT security test to 99 successful test cases.	☐
b)	The required quality of the network module is ambiguous, resulting in the execution of additional risk analyses in this area.	☒
c)	Users reported problems with the user interface of the existing system, which led to the planning of extra usability tests for the new system.	☐
d)	The loading time of web pages is crucial for the success of the new website, therefore a performance testing expert is being incorporated into the project.	☐

FL-5.2.4 (K2) Explain what measures can be taken in response to analyzed product risks [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0):

a) FALSE – The topic of IT security vulnerabilities is assessed as a high product risk, and as a measure to mitigate risk, the issue of IT security testing including high coverage is chosen. This is a sensible measure in terms of risk mitigation (see [CTFL 4.0], Section 5.2.4, 2nd paragraph and 4th bullet point).

b) CORRECT – If the quality of a module is unclear, additional risk analysis is necessary, but this is not a task of risk control. Test planning should aim to eliminate uncertainties and ensure quality (see [CTFL 4.0], Section 5.2.4).

c) FALSE – Since users had issues with the user interface of the previous system, the product risk for the usability of the new user interface is assessed as very high, leading to further usability tests being planned. This risk mitigation measure (more tests in the appropriate test method, higher coverage) is sensible, and thus, this statement is meaningful within the framework of risk management (see [CTFL 4.0], Section 5.2.4, 2nd paragraph and 4th bullet point).

d) FALSE – Since the time taken to load web pages is deemed crucial to the success of the new website, website performance is assessed as a risk. The selection of testers with the right level of experience and skills suitable for a particular risk type is a sensible risk mitigation measure (see [CTFL 4.0], Section 5.2.4, 2nd paragraph and 1st bullet point). Therefore, deploying a performance test expert is meaningful within the framework of risk management.

Question 35	FL-5.3.1	K1	Score 1.0

Which of the following is a product quality metric?

Please select ONE Option! (1 out of 4)

a)	Mean time to failure	☒
b)	Number of defects found	☐
c)	Requirements coverage	☐
d)	Defect density	☐

FL-5.3.1 (K1) Recall metrics used for testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.3.1):

a) CORRECT – Product quality metrics measure quality characteristics. Mean time to failure measures maturity, so it is a product quality metric (see [CTFL4.0], section 5.3.1, 3rd bullet point).

b) FALSE – This is an example of a defect metric, not a product quality metric (see [CTFL4.0], section 5.3.1, 4th bullet point).

c) FALSE – This is an example of a coverage metric, not a product quality metric (see [CTFL4.0], section 5.3.1, 6th bullet point).

d) FALSE – This is an example of a defect metric, not a product quality metric (see [CTFL4.0], section 5.3.1, 4th bullet point).

Question 36	FL-5.3.3	K2	Score 1.0

Imagine you are part of an agile team based in North America. Your team is developing a product for a client located in Europe. The team adheres to the DevOps approach and utilizes a continuous integration/continuous delivery pipeline for development.

Given the geographical distance and the agile nature of the project, which of the following communication methods would be the LEAST effective for conveying test progress to the client?

Please select ONE Option! (1 out of 4)

a)	In-person meetings (Face-to-face)	☒
b)	Interactive Dashboards	☐
c)	Email Updates	☐
d)	Video conferencing	☐

FL-5.3.3 (K2) Exemplify how to communicate the status of testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.3.3):

According to the syllabus, only face-to-face communication across different time zones is not always possible. See [CTFL4.0], section 5.3.3, paragraph 2, sentence 2. Therefore, option a) is correct.

a) CORRECT – The client is in a different location and time zone, so it may be difficult to communicate face-to-face (see [CTFL4.0], section 5.3.3, paragraph 2, sentence 2).

b) FALSE – Dashboards are usually available to any user at any time, so the difference in time zones will not be as much of a hindrance to communication as verbal, face-to-face communication.

c) FALSE – Although the time difference between Europe and America is several hours, and this may cause some inconvenience, it is certainly not as great as with communicating face-to-face.

FALSE – Video conferencing tools are a convenient means of communication. Although communication between Europe and America during working hours usually requires one party to connect in the very early or very late hours, this is not as much of an inconvenience as verbal, face-to-face communication.

Question 37	FL-5.4.1	K2	Score 1.0

Which of the following BEST describes an example of how configuration management (CM) supports testing?

Please select ONE Option! (1 out of 4)

a)	Using the version number of the environment, the CM tool can retrieve the version numbers of libraries, stubs and drivers used in that environment.	☒
b)	The change of baselines can be flexibly and pragmatically supported by using CM tools, should the testers consider this necessary due to unexpected events during test execution.	☐
c)	Configuration management supports the tracing of test scripts and test cases. Test results, on the other hand, are managed by defect management.	☐
d)	In configuration management, complex configuration items are summarized by a baseline. To establish this as a baseline, testers can no longer return to an earlier baseline at a later time.	☐

FL-5.4.1 (K2) Summarize how configuration management supports testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.4.1):

a) CORRECT – For a complex configuration item (e.g. a test environment), KM records the elements that make it up, their relationships and versions (see [CTFL4.0], section 5.4, paragraph 2, sentence 2).

b) FALSE – A formal change control process is required to change baselines (see [CTFL4.0], section 5.4, paragraph 2, sentence 2).

c) FALSE – Configuration management also supports the tracking of test results (see [CTFL4.0], section 5.4, paragraph 1).

d) FALSE – It is possible to revert to a previous baseline. See [CTFL4.0], section 5.4, paragraph 3, sentence 2. This is also necessary, for example, to be able to track previous results.

Question 38	FL-5.5.1	K3	Score 1.0

You are testing a sort function that uses a list of numbers as an input and returns the same numbers sorted in ascending order.

The log from the test execution looks as follows:

Environment configuration: sort function build 2.002.2182, test case set: TCS-3, # of TCs: 5
Test run ID: 736
Start 12:43:21.003

12:43:21.003	Execution of TC1.	Input: 3.	Output: 3.	Result: passed
12:43:21.003	Execution of TC2.	Input: 3, 11, 6, 5.	Output: 3, 5, 6, 11.	Result: passed
12:43:21.004	Execution of TC3.	Input: 8, 7, 3, 7, 1.	Output: 1, 3, 7, 8.	Result: failed
12:43:21.005	Execution of TC4.	Input: -2, -2, -2, -3, -3.	Output: -3, -2.	Result: failed
12:43:21.005	Execution of TC5.	Input: 0, -2, 0, 3, 4, 4.	Output: -2, 0, 3, 4.	Result: failed

End 12:43:21.005
Total time of test cycle: 0:00:00.002

Which of the following provides the BEST description of the failure that can be used in a defect report?

Please select ONE Option! (1 out of 4)

a)	The system fails to sort several sets of numbers. Reference: TC3, TC4, TC5.	☐
b)	The system seems to disregard duplicates while sorting. Reference: TC3, TC4, TC5.	☒
c)	The system fails to sort negative numbers. Reference: TC4, TC5.	☐
d)	TC3, TC4 and TC5 have defects (duplicate input data) and should be corrected.	☐

FL-5.5.1 (K3) Prepare a defect report [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 5.5.1):

a) FALSE – While the sentence is true, it does not provide much value for the developer. The observed deviations allow for a more detailed analysis. Option b) is therefore preferable.

b) CORRECT – From the test results it seems that the system ignores duplicates and sorts the list disregarding the repetitions. This is probably the cause of failures in TC3, TC4, TC5. Such information may help the developer to find the defect and fix it more efficiently.

c) FALSE – The system does not fail in sorting negative numbers. The problem is rather in disregarding duplicates.

d) FALSE – The test cases TC3, TC4 and TC5 fail, but we are not aware that the test cases have any defects. The specification does not state that duplicates may not be used or that all numbers must be different.

Question 39	FL-6.1.1	K2	Score 1.0

Consider the following descriptions:

1. **Support for tracking workflows**
2. **Facilitate communication**
3. **Virtual machines**
4. **Support for evaluation of reviews**

and the following test tool categories:

A. **Static testing tools**

B. **Tools supporting scalability and deployment standardization**

C. **DevOps tools**

D. **Collaboration tools**

Which of the following BEST matches the descriptions and tool categories?

Please select ONE Option! (1 out of 4)

a)	1A, 2B, 3C, 4D	☐
b)	1B, 2D, 3C, 4A	☐
c)	1C, 2D, 3B, 4A	☒
d)	1D, 2C, 3A, 4B	☐

FL-6.1.1 (K2) Explain how different types of test tools support testing [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 6.1.1):

Considering each of the listed tool categories and their descriptions:

A. Static testing tools – support the tester in performing reviews and static analysis (4) (see [CTFL4.0], section 6.1.1, bullet point 2).

B. Tools supporting scalability and deployment standardization – For example, virtual machines containerization tools (3) (see [CTFL4.0], paragraph 6.1.1, indent 8).

C. DevOps tools – support the DevOps delivery pipeline, workflow tracking, automated build process(es), continuous integration/continuous delivery (CI/CD) (1) (see [CTFL4.0], paragraph 6.1.1, bullet point 6).

D. Collaboration tools – facilitate communication (2) (see [CTFL4.0], paragraph 6.1.1, indent 7).

Thus:

a) FALSE

b) FALSE

c) CORRECT – The correct match is: 1C, 2D, 3B, 4A

d) FALSE

Question 40	FL-6.2.1	K1	Score 1.0

Which of the following is MOST likely to apply to test automation?

Please select ONE Option! (1 out of 4)

a)	Test automation provides measurement of more complex coverage criteria.	☒
b)	Test automation gives some of the responsibility for the testing to the tool vendor.	☐
c)	Test automation removes the need for critical thinking when analyzing test results.	☐
d)	Test automation generates system-level test cases from an analysis of the program code.	☐

FL-6.2.1 (K1) Recall the benefits and risks of test automation [CTFL 4.0].

Justification (see ISTQB® Foundation Level Syllabus v4.0; Section 6.1.2):

a) CORRECT – Test automation can provide measures that are too complicated for humans to derive, such as white-box test coverage measures for all but the most trivial code (see [CTFL4.0], section 6.2, bullet point 3).

b) FALSE – By using test tools the responsibility for the testing is NOT shared with the tool vendor as the vendor is not involved in the testing, and it is the tester's responsibility. The only possible responsibility that could be assigned to the tool vendor is if the tool fails to work as expected and provides incorrect test results (see [CTFL4.0], section 6.2, bullet point 11).

c) FALSE – Testers still need to perform critical thinking when analyzing anomalies in the test results to determine their likely cause (see [CTFL4.0], section 6.2, bullet point 10).

d) FALSE – Neither testers nor tools can generate test cases simply from an analysis of the program code as the code is the implementation and provides no information on the expected results, which will need to come from another part of the test basis, such as the design specification (see [CTFL4.0], section 6.2, bullet point 7).

Space for your notes:
(are neither read nor valuated during correction)

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(are neither read nor valuated during correction)