Sample Exam – Answers
Sample Exam set A
Version 1.4

ISTQB® Certified Tester Syllabus Foundation Level
Compatible with Syllabus version 4.0

International Software Testing Qualifications Board

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Acknowledgements

Revision History

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Version	Date	Remarks
1.4	December 19, 2023	Bump to match Question document version
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1.2	November 6, 2023	Correction of Answer: #2, #5, #17
1.1	October 16, 2023	Bump to match Question document version Layout tweaks
1.0	April 12, 2023	Release version

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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 will find:

- Answer Key table, including for each correct answer:
    - K-level, Learning Objective, and Point value
- Answer Key table for additional questions, 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

* The first 40 questions and their answers are arranged according to the exam structure and rules and therefore simulate a sample exam. The block "Answers to Additional Sample Questions" contains the answers to additional questions that are not part of the sample exam but may help the learner to gain a deeper knowledge in the related fields.

- *Questions are contained in a separate document*

Answer Key

Question Number (#)	Correct Answer	LO	K-Level	Points
1	c	FL-1.1.1	K1	1
2	a	FL-1.2.1	K2	1
3	a	FL-1.3.1	K2	1
4	b	FL-1.4.1	K2	1
5	b	FL-1.4.2	K2	1
6	a, e	FL-1.4.5	K2	1
7	b	FL-1.5.1	K2	1
8	d	FL-1.5.2	K1	1
9	d	FL-2.1.2	K1	1
10	c	FL-2.1.3	K1	1
11	d	FL-2.1.5	K2	1
12	c	FL-2.1.6	K2	1
13	a	FL-2.2.1	K2	1
14	b	FL-2.2.3	K2	1
15	a	FL-3.1.2	K2	1
16	d	FL-3.2.1	K1	1
17	b	FL-3.2.4	K2	1
18	d	FL-3.2.5	K1	1
19	c	FL-4.1.1	K2	1
20	b	FL-4.2.1	K3	1

Question Number (#)	Correct Answer	LO	K-Level	Points
21	a	FL-4.2.2	K3	1
22	d	FL-4.2.3	K3	1
23	d	FL-4.2.4	K3	1
24	a	FL-4.3.1	K2	1
25	d	FL-4.3.3	K2	1
26	a	FL-4.4.1	K2	1
27	c	FL-4.4.2	K2	1
28	b	FL-4.5.2	K2	1
29	a	FL-4.5.3	K3	1
30	c	FL-5.1.2	K1	1
31	c, e	FL-5.1.3	K2	1
32	d	FL-5.1.4	K3	1
33	a	FL-5.1.5	K3	1
34	a	FL-5.1.7	K2	1
35	c	FL-5.2.4	K2	1
36	d	FL-5.3.3	K2	1
37	c	FL-5.4.1	K2	1
38	c	FL-5.5.1	K3	1
39	c	FL-6.1.1	K2	1
40	b	FL-6.2.1	K1	1

Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
1	c	a) Is not correct. It is impossible to prove that there are no defects anymore in the system under test. See testing principle 1 b) Is not correct. See testing principle 7 c) Is correct. Testing finds defects and failures which reduces the level of risk and at the same time gives more confidence in the quality level of the test object d) Is not correct. It is impossible to test all combinations of inputs (see testing principle 2)	FL-1.1.1	K1	1
2	a	a) Is correct. It is important that testers are involved from the beginning of the software development lifecycle (SDLC). It will increase understanding of design decisions and will detect defects early. b) Is not correct. Both developers and testers will have more understanding of each other's work products and how to test the code c) Is not correct. If testers can work closely with system designers, it will give them insight as to how to test d) Is not correct. Being certified does not automatically mean that the tester will be better in test design	FL-1.2.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
3	a	a) Is correct. This principle means that if the same tests are repeated over and over again, eventually these tests no longer find any new defects. This is probably why the tests all passed in this release as well b) Is not correct. This principle says about the mistaken belief that just finding and fixing a large number of defects will ensure the success of a system c) Is not correct. This principle says that a small number of components usually contain most of the defects d) Is not correct. This principle states that testing all combinations of inputs and preconditions is not feasible	FL-1.3.1	K2	1
4	b	a) Is not correct. Estimating the test effort is part of test planning b) Is correct. This is an example of defining test conditions which is a part of test analysis c) Is not correct. Using test techniques to derive coverage items is a part of test design d) Is not correct. Reporting defects found during dynamic testing is a part of test execution	FL-1.4.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
5	b	i. Is true. The SDLC has an influence on the test process ii. Is false. The number of defects detected in previous projects may have some influence, but this is not as significant as i, iii and iv iii. Is true. The identified product risks are one of the most important factors influencing the test process iv. Is true. Regulatory requirements are important factors influencing the test process v. Is false. The test environment has no significant influence on the test process Thus: a) Is not correct b) Is correct c) Is not correct d) Is not correct	FL-1.4.2	K2	1
6	a, e	a) Is correct. This is done by the testers b) Is not correct. The product backlog is built and maintained by the product owner c) Is not correct. This is done by the development team d) Is not correct. This is a managerial role e) Is correct. This is done by the testers	FL-1.4.5	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
7	b	i. Is true. Having domain knowledge is an important tester skill ii. Is false. This is a task of the business analyst together with the business representative iii. Is true. Being a good team player is an important skill iv. Is false. Planning and organizing the work of the team is a task of the test manager or, mostly in an Agile software development project, the whole team and not just the tester v. Is true. Critical thinking is one of the most important skills of testers Thus: a) Is not correct b) Is correct c) Is not correct d) Is not correct	FL-1.5.1	K2	1
8	d	a) Is not correct. The test automation approach is defined by testers with the help of developers and business representatives b) Is not correct. The test strategy is decided in collaboration with the developers c) Is not correct. Testers, developers, and business representatives are part of the whole team approach d) Is correct. Testers will work closely with business representatives to ensure that the desired quality levels are achieved. This includes supporting and collaborating with them to help them create suitable acceptance tests	FL-1.5.2	K1	1
9	d	a) Is not correct b) Is not correct c) Is not correct d) Is correct. This rule holds for all SDLC models	FL-2.1.2	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
10	c	a) Is not correct. It is more often used in behavior-driven development (BDD) b) Is not correct. It is the description of test-driven development (TDD) c) Is correct. In acceptance test-driven development (ATDD) tests are written from acceptance criteria as part of the design process d) Is not correct. It is used in BDD	FL-2.1.3	K1	1
11	d	a) Is not correct. Early review is an example of the shift left approach b) Is not correct. TDD is an example of the shift left approach c) Is not correct. Early non-functional testing is an example of the shift left approach d) Is correct. Test scripts should be subject to configuration management, so it makes no sense to create the test scripts before this process is set up	FL-2.1.5	K2	1
12	c	a) Is not correct. Retrospectives are more useful for identifying improvement opportunities and have little importance for clients b) Is not correct. Business representatives are not giving feedback about the product itself. Therefore, there is no financial gain to the organization c) Is correct. Regularly conducted retrospectives, when appropriate follow up activities occur, are critical to continual improvement of development and testing d) Is not correct. Courage and respect are values of Extreme Programming and are not closely related to retrospectives	FL-2.1.6	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
13	a	Considering: • The test basis for acceptance testing is the user's business needs (1D) • Communication between components is tested during component integration testing (2B) • Failures in logic can be found during component testing (3A) • Business rules are the test basis for system testing (4C) Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-2.2.1	K2	1
14	b	Because TC1 and TC3 failed in Execution 1 (i.e., test (1) and test (3)), test (4) and test (6) are confirmation tests. Because TC2 and TC3 failed in Execution 2 (i.e., tests (5) and (6)), test (8) and test (9) are also confirmation tests. TC2 passed in Execution 1 (i.e., test (2)), so test (5) is a regression test. TC1 passed in the Execution 2 (i.e., test (4)), so test (7) is also a regression test. Thus: a) Is not correct b) Is correct c) Is not correct d) Is not correct	FL-2.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
15	a	a) Is correct. Defect management is no less expensive. Finding and fixing defects later in SDLC is more costly b) Is not correct. This is a benefit of static testing c) Is not correct. This is a benefit of static testing d) Is not correct. This is a benefit of static testing	FL-3.1.2	K2	1
16	d	a) Is not correct. Feedback can improve the test process, but if one only wants to improve future projects, the feedback does not need to come early or frequently b) Is not correct. Feedback is not used to prioritize requirements c) Is not correct. The quality of changes can be measured in multiple ways d) Is correct. Early and frequent feedback allows for the early communication of potential quality problems	FL-3.2.1	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
17	b	Considering the attributes: • Specified for walkthroughs, technical reviews, and inspections; thus, the reviews being performed cannot be informal reviews • The purpose of evaluating quality is one of the most important objectives of a walkthrough • This is not allowed for inspections and is typically not done in technical reviews. A moderator is needed in walkthroughs and is allowed for informal reviews • All types of reviews can include individual preparation (even informal reviews) • All types of reviews can produce a review report, although informal reviews do not require documentation Thus: a) Is not correct b) Is correct c) Is not correct d) Is not correct	FL-3.2.4	K2	1
18	d	a) Is not correct. Adequate time for individuals is a success factor b) Is not correct. Splitting work products into small adequate parts is a success factor c) Is not correct. Avoiding behaviors that might indicate boredom, exasperation, etc. is a success factor d) Is correct. During reviews one can find defects, not failures	FL-3.2.5	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
19	c	a) Is not correct. This is a common characteristic of white-box test techniques. Test conditions, test cases, and test data are derived from a test basis that may include code, software architecture, detailed design, or any other source of information regarding the structure of the software. b) Is not correct. This is a common characteristic of white-box test techniques. Coverage is measured based on the items tested within a selected structure and the technique applied to the test basis c) Is correct. This is a common characteristic of experience-based test techniques. This knowledge and experience include expected use of the software, its environment, likely defects, and the distribution of those defects is used to define tests d) Is not correct. This is a common characteristic of black-box test techniques. Test cases may be used to detect gaps within requirements and the implementation of the requirements, as well as deviations from the requirements	FL-4.1.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points

20	b	"Small garden" and "large garden" can go only with "ground floor", so we need two test cases with "ground floor" which cover these two "garden type" partitions.
		We need two more test cases to cover the two other "floor" partitions and a remaining "garden type" partition of "no garden".
		We need a total of four test cases:
		     TC1 (ground floor, small garden)
		     TC2 (ground floor, large garden)
		     TC3 (first floor, no garden)
		     TC4 (second or higher floor, no garden)
		
		Thus:
		a) Is not correct
		b) Is correct
		c) Is not correct
		d) Is not correct
			FL-4.2.1	K3	1

21	a	There are 12 boundary values for the final result values: 0, 50, 51, 60, 61, 70, 71, 80, 81, 90, 91, and 100. The test cases cover six of them (TC1 – 91, TC2 – 50, TC3 – 81, TC4 – 60, TC5 – 70 and TC7 – 51). Therefore, the test cases cover 6/12 = 50%. Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-4.2.2	K3	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
22	d	a) Is not correct. A member without a missed deadline can get a discount and a gift T-Shirt after 15 bicycle rentals b) Is not correct. A member without a missed deadline can get a discount but no gift T-Shirt until they rented a bicycle 15 times c) Is not correct. Non-members cannot get a discount, even if they did not miss a deadline yet d) Is correct. No discount as a non-member that has also missed a deadline, but only members can receive a gift T-Shirt. Hence, the action is not correct	FL-4.2.3	K3	1

23	d	"test" and "error" transitions cannot occur in one test case.
		Neither can both "done" transitions.
		This means we need at least three test cases to achieve transition coverage. For example:
		    TC1: test, done
		    TC2: run, error, done
		    TC3: run, pause, resume, pause, done
		
		Thus:
		a) Is not correct
		b) Is not correct
		c) Is not correct
		d) Is correct
			FL-4.2.4	K3	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
24	a	a) Is correct. Since 100% statement coverage is achieved, every statement, including the ones with defects, must have been executed and evaluated at least once b) Is not correct. Coverage depends on what is tested, not on the number of test cases. For example, for code "if (x==0) y=1", one test case (x=0) achieves 100% statement coverage, but two test cases (x=1) and (x=2) together achieve only 50% statement coverage c) Is not correct. If there is a loop in the code there may be an infinite number of possible paths, so it is not possible to execute all the possible paths in the code d) Is not correct. Exhaustive testing is not possible (see the seven testing principles section in the syllabus). For example, for code "input x; print x" any single test with arbitrary x achieves 100% statement coverage, but covers one input value	FL-4.3.1	K2	1
25	d	a) Is not correct. The fundamental strength of white-box test techniques is that the entire software implementation is taken into account during testing b) Is not correct. White-box coverage measures provide an objective measure of coverage and provide the necessary information to allow additional tests to be generated to increase this coverage c) Is not correct. White-box test techniques can be used to perform reviews (static testing) d) Is correct. This is the weakness of the white-box test techniques. They are not able to identify the missing implementation, because they are based solely on the test object structure, not on the requirements specification	FL-4.3.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
26	a	a) Is correct. The basic concept behind error guessing is that the tester tries to guess what errors may have been made by the developer and what defects may be in the test object based on past experience (and sometimes checklists) b) Is not correct. Although a testers who used to be a developer may use their personal experience to help them when performing error guessing, the test technique is not based on prior knowledge of development c) Is not correct. Error guessing is not a usability technique for guessing how users may fail to interact with the test object d) Is not correct. Duplicating the development task has several flaws that make it impractical, such as the tester having equivalent skills to the developer and the time involved to perform the development. It is not error guessing	FL-4.4.1	K2	1
27	c	a) Is not correct. This is a new product. You probably do not have a checklist yet and test conditions might not be known due to missing requirements b) Is not correct. This is a new product. You probably do not have enough information to make correct error guesses c) Is correct. Exploratory testing is most useful when there are few known specifications and/or there is a pressing timeline for testing d) Is not correct. Branch testing is time-consuming, and your management is asking about some test results now. Also, branch testing does not involve domain knowledge	FL-4.4.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
28	b	a) Is not correct. Retrospectives are used to capture lessons learned and to improve the development and testing process, not to document the acceptance criteria b) Is correct. This is the standard way to document acceptance criteria c) Is not correct. Verbal communication does not allow to physically document the acceptance criteria as part of a user story ("card" aspect in the 3C's model) d) Is not correct. Acceptance criteria are related to a user story, not a test plan. Also, acceptance criteria are the conditions that have to be fulfilled to decide if the user story is complete. Risks are not such conditions	FL-4.5.2	K2	1
29	a	a) Is correct. This test covers two acceptance criteria: one about editing the document and one about saving changes b) Is not correct. Acceptance criteria cover the editor activities, not the content owner activities c) Is not correct. Scheduling the edited content for publication may be a nice feature, but it is not covered by the acceptance criteria d) Is not correct. Acceptance criteria state about reassigning from an editor to the content owner, not to another editor	FL-4.5.3	K3	1
30	c	a) Is not correct. Priorities for user stories are determined by the business representative together with the development team b) Is not correct. Testers focus on both functional and non-functional aspects of the system to be tested c) Is correct. According to the syllabus, this is one of the ways testers add value to iteration and release planning d) Is not correct. Early test design is not part of release planning. Early test design does not automatically guarantee the release of quality software	FL-5.1.2	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
31	c, e	a) Is not correct. Test environment readiness is a resource availability criterion; hence it belongs to the entry criteria b) Is not correct. This is a resource availability criterion; hence it belongs to the entry criteria c) Is correct. Estimated defect density is a measure of diligence; hence it belongs to the exit criteria. d) Is not correct. Requirements translated into a given format result in testable requirements; hence it belongs to the entry criteria e) Is correct. Automation of regression tests is a completion criterion; hence it belongs to the exit criteria	FL-5.1.3	K2	1

32	d	In the three-point estimation technique:
		    E = (optimistic + 4*most likely + pessimistic)/6
		    E = (2+(4*11)+14)/6 = 10
		
		Thus:
		a) Is not correct
		b) Is not correct
		c) Is not correct
		d) Is correct
			FL-5.1.4	K3	1

33	a	Test TC 001 must come first, followed by TC 002, to satisfy dependencies. Afterwards, TC 003 to satisfy priority and then TC 004, followed by TC 005. Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-5.1.5	K3	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
34	a	Considering: • Usability testing is in Q3 (1 – C) • Component testing is in Q1 (2 – A) • Functional testing is in Q2 (3 – B) • Reliability testing is in Q4 (4 – D) Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-5.1.7	K2	1
35	**c**	a) Is not correct. We do not accept the risk; concrete actions are proposed b) Is not correct. No contingency plans are proposed c) Is correct. The proposed actions are related to testing, which is a form of risk mitigation d) Is not correct. Risk is not transferred but mitigated	FL-5.2.4	K2	1
36	d	a) Is not correct. Acceptance criteria are the conditions used to decide whether the user story is ready. They cannot show work progress b) Is not correct. Defect reports inform about the defects. They do not show work progress c) Is not correct. Test completion report can be created after the iteration is finished, so it will not show the progress continuously within an iteration d) Is correct. Burndown charts are a graphical representation of work left to do versus time remaining. They are updated daily, so they can continuously show the work progress	FL-5.3.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
37	c	a) Is not correct. Traceability is the relationship between two or more work products, not between different versions of the same work product b) Is not correct. Maintenance testing is about testing changes; it is not related closely to versioning c) Is correct. To support testing, configuration management may involve the version control of all test items d) Is not correct. Requirements engineering is the elicitation, documentation, and management of requirements; it is not closely related to test script versioning	FL-5.4.1	K2	1
38	c	a) Is not correct. The expected result is "the application should accept the provided input and create the user". The actual result is "The application hangs up after entering "Test input. $ä"". b) Is not correct. There is a reference to the test case and to the related requirement and it states that the defect is rejected. Also, the defect status would not be very helpful for the developers c) Is correct. We do not know in which test environment the anomaly was detected, and we also do not know which application (and its version) is affected d) Is not correct. The defect report states that the anomaly is urgent, that it is a global issue (i.e., many, if not all, test administration accounts are affected) and states the impact is high for business stakeholders	FL-5.5.1	K3	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
39	c	a) Is not correct. Test monitoring involves the ongoing checking of all activities and comparison of actual progress against the test plan. Test control involves taking the actions necessary to meet the test objectives of the test plan. No test data are prepared during these activities b) Is not correct. Test analysis includes analyzing the test basis to identify test conditions and prioritize them. Test design includes elaborating the test conditions into test cases and other testware. Test data are not prepared during these activities c) Is correct. Test implementation includes creating or acquiring the testware necessary for test execution (e.g., test data) d) Is not correct. Test completion activities occur at project milestones (e.g., release, end of iteration, test level completion), so it is too late for preparing test data	FL-6.1.1	K2	1
40	b	a) Is not correct. Test automation does not introduce unknown regressions in production b) Is correct. Wrong allocation of effort to maintain testware is a risk c) Is not correct. Test tools must be selected so that they and their testware can be relied upon d) Is not correct. The primary goal of test automation is to reduce manual testing. So, this is a benefit, not a risk	FL-6.2.1	K1	1

Appendix: Answer Key for Additional Sample Questions

Question Number (#)	Correct Answer	LO	K-Level	Points	Question Number (#)	Correct Answer	LO	K-Level	Points
A1	a	FL-1.1.2	K2	1	A14	b	FL-3.2.3	K1	1
A2	d	FL-1.2.2	K1	1	A15	c	FL-4.2.2	K3	1
A3	d	FL-1.2.3	K2	1	A16	d	FL-4.3.2	K2	1
A4	d	FL-1.4.3	K2	1	A17	c	FL-4.4.3	K2	1
A5	c	FL-1.4.4	K2	1	A18	b	FL-4.5.1	K2	1
A6	d	FL-1.5.3	K2	1	A19	d	FL-5.1.1	K2	1
A7	a	FL-2.1.1	K2	1	A20	b	FL-5.1.4	K3	1
A8	c	FL-2.1.4	K2	1	A21	b	FL-5.1.6	K1	1
A9	b	FL-2.2.2	K2	1	A22	c	FL-5.2.1	K1	1
A10	a	FL-2.3.1	K2	1	A23	a	FL-5.2.2	K2	1
A11	c	FL-3.1.1	K1	1	A24	d	FL-5.2.3	K2	1
A12	d	FL-3.1.3	K2	1	A25	a, d	FL-5.3.1	K1	1
A13	b	FL-3.2.2	K2	1	A26	b	FL-5.3.2	K2	1

Appendix: Answers to Additional Sample Questions

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A1	a	a) Is correct. Debugging is the process of finding, analyzing, and removing the causes of failures in a component or system b) Is not correct. Testing is the process concerned with planning, preparation and evaluation of a component or system and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects. It is not related to fixing causes of failures c) Is not correct. Requirement elicitation is the process of gathering, capturing, and consolidating requirements from available sources. It is not related to fixing causes of failures d) Is not correct. Defect management is the process of recognizing, recording, classifying, investigating, resolving, and disposing of defects. It is not related to fixing causes of failures	FL-1.1.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A2	d	Considering: Testing and quality assurance are not the same. Testing is the process consisting of all software development lifecycle (SDLC) activities, both static and dynamic, concerned with planning, preparation and evaluation of a component or system and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects. Quality assurance is focused on establishing, introducing, monitoring, improving, and adhering to the quality-related processes. Thus: a) Is not correct b) Is not correct c) Is not correct d) Is correct	FL-1.2.2	K1	1
A3	d	a) Is not correct. The root cause is the distraction that the programmer experienced while programming b) Is not correct. Accepting invalid inputs is a failure c) Is not correct. The error is the mistaken thinking that resulted in putting the defect in the code d) Is correct. The problem in the code is a defect	FL-1.2.3	K2	1
A4	d	The testware under consideration is a test charter Test charters are the output from test design Thus: a) Is not correct b) Is not correct c) Is not correct d) Is correct	FL-1.4.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A5	c	a) Is not correct. Performing the impact analysis will not give information about completeness of tests. Analyzing the impact analysis of changes will help to select the right test cases for execution b) Is not correct. Traceability does not give information about the estimated level of residual risk if the test cases are not traced back to risks c) Is correct. Performing the impact analysis of the changes helps in selecting the test cases for the regression test d) Is not correct. Analyzing the traceability between the test basis, test objects and test cases does not help in selecting test data to achieve the assumed coverage of the test object. Selecting test data is more related to test analysis and test implementation, not traceability	FL-1.4.4	K2	1
A6	d	a) Is not correct. Quality should be the responsibility of everyone working on the project and not the sole responsibility of the test team b) Is not correct. First, it is not a benefit if an external test team does not meet delivery deadlines, and second, there is no reason to believe that external test teams will feel they do not have to meet strict delivery deadlines c) Is not correct. It is bad practice for the test team to work in complete isolation, and we would expect an external test team to be concerned with changing project requirements and communicating well with developers d) Is correct. Specifications are never perfect, meaning that assumptions will have to be made by the developer. An independent tester is useful in that they can challenge and verify the assumptions and subsequent interpretation made by the developer	FL-1.5.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A7	a	a) Is correct. In sequential development models, in the initial phases, testers participate in requirement reviews, test analysis, and test design. The executable code is usually created in the later phases, so dynamic testing cannot be performed early in the SDLC b) Is not correct. Static testing can always be performed early in the SDLC c) Is not correct. Test planning should be performed early in the SDLC before the test project begins d) Is not correct. Acceptance testing can be performed when there is a working product. In sequential SDLC models the working product is usually delivered late in the SDLC	FL-2.1.1	K2	1

A8	c	Consider:
		  i. Is true. Faster product release and faster time to market is an advantage of DevOps
		  ii. Is false. Typically, we need less effort for manual tests because of the use of test automation
		  iii. Is true. Constant availability of executable software is an advantage
		  iv. Is false. More regression tests are needed
		  v. Is false. Not everything is automated and setting up a test automation framework is expensive
		
		Thus:
		a) Is not correct
		b) Is not correct
		c) It is correct
		d) Is not correct
			FL-2.1.4	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A9	b	a) Is not correct. The fact that the requirement about the system's performance comes directly from the client and that the performance is important from the business point of view (i.e., high priority) does not make these tests functional, because they do not check "what" the system does, but "how" (i.e., how fast the orders are processed) b) Is correct. This is an example of performance testing, a type of non-functional testing c) Is not correct. From the scenario we do not know if interacting with the user interface is a part of the test conditions. But even if we did, the main test objective of these tests is to check the performance, not the usability d) Is not correct. We do not need to know the internal structure of the code to perform the performance testing. One can execute performance efficiency tests without structural knowledge	FL-2.2.2	K2	1
A10	a	a) Is correct. When a system is retired, this can require testing of data migration, which is a form of maintenance testing b) Is not correct. Regression testing verifies whether a fix accidentally affected the behavior of other parts of the code, but now we are talking about data migration to a new system c) Is not correct. Component testing focuses on individual hardware or software components, not on data migration d) Is not correct. Integration testing focuses on interactions between components and/or systems, not on data migration	FL-2.3.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A11	c	Only third-party executable code cannot be reviewed. Thus: a) Is not correct b) Is not correct c) It is correct d) Is not correct	FL-3.1.1	K1	1

A12	d	Consider:
		   i. These behaviors are easily detectable while the software is running. Hence, dynamic testing shall be used to identify them
		   ii. This is an example of deviations from standards, which is a typical defect that is easier found with static testing
		   iii. If the software is executed during the test, it is dynamic testing
		   iv. Identifying defects as early as possible is the test objective of both static testing and dynamic testing
		   v. This is an example of gaps in the test basis traceability or coverage, which is a typical defect that is easier found with static testing
		
		Thus:
		a) Is not correct
		b) Is not correct
		c) Is not correct
		d) Is correct
			FL-3.1.3	K2	1

A13	b	a) Is not correct. In all types of reviews there is more than one role, even in informal ones b) Is correct. There are several activities during the formal review process c) Is not correct. Documentation to be reviewed should be distributed as early as possible d) Is not correct. Defects found during the review should be reported	FL-3.2.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A14	b	a) Is not correct. This is the task of the review leader b) Is correct. This is the task of the management in a formal review c) Is not correct. This is the task of the moderator d) Is not correct. This is the task of the scribe	FL-3.2.3	K1	1
A15	c	There are three equivalence partitions: {..., 10, 11}, {12}, and {13, 14, ...}. The boundary values are 11, 12 and 13. In the three-point boundary value analysis for each boundary, we need to test the boundary and both its neighbors, so: • for 11 we test 10, 11, 12 • for 12 we test 11, 12, 13 • for 13 we test 12, 13, 14 Altogether we need to test 10, 11, 12, 13, and 14 Thus: a) Is not correct b) Is not correct c) Is correct d) Is not correct	FL-4.2.2	K3	1
A16	d	a) Is not correct. In this case one test case is still needed since there is at least one (unconditional) branch to be covered b) Is not correct. Covering only unconditional branches does not imply covering all conditional branches c) Is not correct. 100% branch coverage implies 100% statement coverage, not otherwise. For example, for an IF decision without the ELSE, one test is enough to achieve 100% statement coverage, but it only achieves 50% branch coverage d) Is correct. Each decision outcome corresponds to a conditional branch, so 100% branch coverage implies 100% decision coverage	FL-4.3.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A17	c	a) Is not correct. The book provides general guidance, and is not a formal requirements document, a specification, or a set of use cases, user stories, or business processes b) Is not correct. While you could consider the list as a set of test charters, it more closely resembles the list of test conditions to be checked c) Is correct. The list of user interface best practices is the list of test conditions to be systematically checked d) Is not correct. The tests are not focused on failures that could occur, but rather on knowledge about what is important for the user, in terms of usability	FL-4.4.3	K2	1
A18	b	a) Is not correct. Collaborative user story writing means that all stakeholders create the user stories collaboratively, to obtain the shared vision b) Is correct. Collaborative user story writing means that all stakeholders create the user stories collaboratively, to obtain the shared vision c) Is not correct. Collaborative user story writing means that all stakeholders create the user stories collaboratively, to obtain the shared vision d) Is not correct. This is the list of properties that each user story should have, not the description of the collaboration-based approach	FL-4.5.1	K2	1
A19	d	a) Is not correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach b) Is not correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach c) Is not correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach d) Is correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach	FL-5.1.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A20	b	a) Is not correct. This should be a team activity and not overruled by one team member b) Is correct. If test estimates are not the same, but the variation in the results is small, applying rules like "accept the number with the most votes" can be applied c) Is not correct. There is no consensus yet as some say 13, others say 8 d) Is not correct. A feature should not be removed only because the team cannot agree on the test estimates	FL-5.1.4	K3	1
A21	b	a) Is not correct. The test pyramid emphasizes having a larger number of tests at the lower test levels b) Is correct. It is not true that near the top of pyramid, test automation should be more formal c) Is not correct. Usually component testing and component integration testing are automated using API-based tools d) Is not correct. For system testing and acceptance testing, the automated tests are typically created using GUI-based tools	FL-5.1.6	K1	1
A22	c	a) Is not correct. Risk impact and risk likelihood are independent b) Is not correct. Risk impact and risk likelihood are independent c) Is correct. Risk impact and risk likelihood are independent d) Is not correct. We need both factors to calculate risk level	FL-5.2.1	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A23	a	Consider: i. It is a Project risk ii. It is a Product risk iii. It is a Product risk iv. It is a Project risk v. It is a Product risk Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-5.2.2	K2	1
A24	d	a) Is not correct. This is an example of a risk monitoring activity, not risk analysis b) Is not correct. This is an example of an architectural decision, not related with testing c) Is not correct. This is an example of performing a quantitative risk analysis and is not related to thoroughness or scope of testing d) Is correct. This shows how risk analysis impacts the thoroughness of testing (i.e., the level of detail)	FL-5.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A25	a, d	a) Is correct. The number of defects found is related to the test object quality b) Is not correct. This is the measure of the test efficiency not the test object quality c) Is not correct. The number of test cases executed does not tell us anything about the quality; test results might do d) Is correct. defect density is related to the test object quality e) Is not correct. Time to repair is a process metric. It does not tell us anything about the product quality	FL-5.3.1	K1	1
A26	b	a) Is not correct. Impediments to testing can be high level and business-related, so this is an important piece of information for business stakeholders b) Is correct. Branch testing is a technical metric used by developers and technical testers. This information is of no interest to business representatives c) Is not correct. Test progress is project related, so it may be useful for business representatives d) Is not correct. Risks impact product quality, so it may be useful for business representatives	FL-5.3.2	K2	1