Sample Exam – Answers

Sample Exam set A
Version 1.5

ISTQB® Certified Tester Syllabus Foundation Level

Compatible with Syllabus version 2018 v3.1

International Software Testing Qualifications Board

Release Date: March 17, 2020

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Acknowledgements

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Revision History

Sample Exam – Answers Layout Template used:	Version 2.0	Date: Marts 16, 2020

Version	Date	Remarks
1.0	May 11, 2018	First Issue
1.1	May 11, 2018	Some text in LO updated Spelling is corrected
1.2	February 16, 2019	Transfer to Sample Exam Template layout Minor changes to multiple Answers Major changes to Answers: 5, 15, 18, 23, 24, 27, 30, 31, 33, 35, 37
1.3	May 31, 2019	Minor changes to Answers: 1, 30 Major changes to Answers: 3, 5, 8
1.4	December 15, 2019	Minor changes to Answers: 9, 10, 17 Major changes to Answers: 8, 34, 35, 37 Replacement of Answer: 40
1.5	March 17, 2020	Transfer to new Sample Exam Template layout Minor changes to Answers: 1, 5, 33

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Introduction

Purpose of this document

The sample questions and answers and associated justifications in this sample exam set 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.

These questions cannot be used as-is in any official examination, but they should serve as guidance for question writers. Given the wide variety of formats and subjects, these sample questions should offer many ideas for the individual Member Boards on how to create good questions and appropriate answer sets for their examinations.

Instructions

The answer set is organized in the following way:

- Correct answer – including justification of the answers
- Learning Objective and K-level of Questions
- Answer Key with Learning Objective and K-level for each question

- Questions are contained in a separate document

Answer Key

Question Number (#)	Correct Answer	LO	K-Level	Points	Question Number (#)	Correct Answer	LO	K-Level	Points
1	b	FL-1.x	K1	1	21	b	FL-4.3.2	K2	1
2	b	FL-1.1.1	K1	1	22	b	FL-4.3.1	K2	1
3	b	FL-1.1.2	K2	1	23	a	FL-4.3.3	K2	1
4	a	FL-1.2.3	K2	1	24	c	FL-4.4.2	K2	1
5	c	FL-1.3.1	K2	1	25	d	FL-4.2.1	K3	1
6	b	FL-1.2.2	K2	1	26	d	FL-4.2.2	K3	1
7	d	FL-1.4.2	K2	1	27	d	FL-4.2.3	K3	1
8	a	FL-1.4.3	K2	1	28	b	FL-4.2.4	K3	1
9	c	FL-2.3.2	K1	1	29	c	FL-4.2.1	K3	1
10	b	FL-2.2.1	K2	1	30	b	FL-5.1.2	K1	1
11	c	FL-2.3.3	K2	1	31	a	FL-5.3.1	K1	1
12	a	FL-2.1.1	K2	1	32	a, b	FL-5.2.1	K2	1
13	a	FL-2.4.1	K2	1	33	a	FL-5.2.3	K2	1
14	d	FL-3.2.2	K1	1	34	a	FL-5.3.2	K2	1
15	c	FL-3.2.1	K2	1	35	b	FL-5.2.2	K2	1
16	c	FL-3.2.3	K2	1	36	a	FL-5.2.6	K2	1
17	a, c	FL-3.1.2	K2	1	37	c	FL-5.2.4	K3	1
18	d	FL-3.2.4	K3	1	38	b	FL-5.6.1	K3	1
19	c	FL-4.x	K1	1	39	d	FL-6.1.2	K1	1
20	d	FL-4.1.1	K2	1	40	a	FL-6.1.1	K2	1

Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
1	b	a) Is not correct. Definition of feature according to glossary b) Is correct. From glossary c) Is not correct. Definition of functionality suitability according to glossary d) Is not correct. Like Definition of Decision table testing according to glossary	FL-1.x	K1	1
2	b	a) Is not correct. Contradiction to principle 3: "Early testing saves time and money" b) Is correct. This is one objective of testing c) Is not correct. Principle #2 states that exhaustive testing is impossible, so one can never prove that all defects were identified d) Is not correct. To make an assessment whether a defect will cause a failure or not, one must detect the defect first. Saying that no remaining defect will cause a failure implicitly means that all defects were found. This again contradicts principle #2	FL-1.1.1	K1	1
3	b	a) Is not correct. Testing does not identify the source of defects, debugging identifies the defects b) Is correct. Dynamic testing can show failures that are caused by defects in the software. Debugging eliminates the defects, which are the source of failures, not the root cause of the defects c) Is not correct. Testing does not remove faults, but debugging remove defects that cause the faults d) Is not correct. Dynamic testing does not directly prevent the causes of failures (defects) but detects the presence of defects	FL-1.1.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
4	a	a) Is correct. A crash is clearly noticeable by the user b) Is not correct. this is a defect, not a failure, since there is something wrong in the code. It may not result in a visible or noticeable failure, for example if the changes in the source code file are only in comments c) Is not correct. The use of wrong input variables may not result in a visible or noticeable failure, for example if nobody uses this particular algorithm; or if the wrong input variable has a similar value to the correct input variable; or if the FALSE result of the algorithm is not used d) Is not correct. This type of fault will not necessarily lead to a failure; for example, if no one uses this special algorithm	FL-1.2.3	K2	1
5	c	a) Is not correct. Testing is context dependent, regardless of it being manual or automated (principle #6), but does not result in detecting a decreasing number of faults as described above b) Is not correct. Exhaustive testing is impossible, regardless of the amount of effort put into testing (principle #2) c) Is correct. Principle #5 says "If the same tests are repeated over and over again, eventually these tests no longer find any new defects. To detect new defects, existing tests and test data may need changing, and new tests may need to be written." Automated regression testing of the same test cases will not bring new findings d) Is not correct. "Defect cluster together" (principle #4). A small number of modules usually contain most of the defects, but this does not mean that fewer and fewer defects will be found	FL-1.3.1	K2	1
6	b	a) Is not correct. Static testing (reviews) contributes, but could not ensure, that requirements are detailed enough b) Is correct. Testing contributes to the achievement of quality in a variety of ways, e.g. such as reducing the risk of inadequate software quality c) Is not correct. This is quality assurance but not testing d) Is not correct. The quality cannot be measured by counting the number of executed test cases without knowing the outcome	FL-1.2.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
7	d	a) Is not correct. This activity is performed during the test design activity (test design) b) Is not correct. This activity is performed during the test implementation activity (test implementation) c) Is not correct. This activity is performed during the test completion activity (test completion) d) Is correct. This activity is performed during the test analysis activity (test analysis)	FL-1.4.2	K2	1
8	a	Glossary defines the following tests as: • Test suite: "A set of test scripts or test procedures to be executed in a specific test run." (1A) • Test case: "A set of preconditions, inputs, actions (where applicable), expected results and post conditions, developed based on test conditions" (2C) • Test script: "A sequence of instructions for the execution of a test" (3B) • Test charter: "Documentation of test activities in session-based exploratory testing" (4D) Thus: a) Is correct b) Is not correct c) Is not correct d) Is not correct	FL-1.4.3	K2	1
9	c	a) Is not correct. Relevant for integration testing b) Is not correct. Relevant for component testing c) Is correct. For acceptance testing, tests are designed to cover all supported financial data file structures and value ranges for bank-to-bank transfers d) Is not correct. Relevant for system testing	FL-2.3.2	K1	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
10	b	a) Is not correct. System testing does not test interfaces between components and interactions between different parts of the system; this is a target of integration tests b) Is correct. Examples of work products that can be used as a test basis for component testing include detailed design, code, data model, component specifications. Examples of work products for system testing include system and software requirement specifications (functional and non-functional) use cases c) Is not correct. Component testing does not ONLY focus on functional characteristics d) Is not correct. Component tests are also executed by developers, whereas system testing typically is the responsibility of (independent) testers	FL-2.2.1	K2	1
11	c	a) Is not correct. Regression testing does not check successful implementation of corrections and confirmation testing does not check for side effects b) Is not correct. The statement about confirmation testing should be about regression testing c) Is correct. See reasons from incorrect answers d) Is not correct. Testing new functionality is not regression testing	FL-2.3.3	K2	1
12	a	a) Is correct. Incremental development involves establishing requirements, designing, building, and testing a system in pieces b) Is not correct. This is a sequential model c) Is not correct. This describes the waterfall model d) Is not correct. Testing alone is not an increment/additional step in the development	FL-2.1.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
13	a	a) Is correct. This is maintainability testing, not maintenance testing b) Is not correct. This is a trigger for maintenance testing: Operational tests of the new environment as well as of the changed software c) Is not correct. This is the trigger for maintenance testing: testing restore/retrieve procedures after archiving for long retention periods d) Is not correct. This is the trigger for maintenance testing: Reactive modification of a delivered software product to correct emergency defects that have caused actual failures	FL-2.4.1	K2	1
14	d	a) Is not correct. Tester and developer are NOT roles in a formal review b) Is not correct. Developer is NOT a role in a formal review c) Is not correct. Designer is NOT a role in a formal review d) Is correct. See reasons from incorrect answers	FL-3.2.2	K1	1
15	c	a) Is not correct. 'Collection of metrics' belongs to the main activity "Fixing and Reporting" b) Is not correct. 'Answer any question.' belongs to the main activity "Initiate Review" c) Is correct. The checking of entry criteria takes place in the planning of a formal review d) Is not correct. The evaluation of the review findings against the exit criteria belongs to the main activity "Issue communication and analysis"	FL-3.2.1	K2	1
16	c	a) Is not correct. Informal review does not use a formal process b) Is not correct. Use of checklists are optional c) Is correct. Inspection is a formal process based on rules and checklists d) Is not correct. Does not explicitly require a formal process and the use of checklists is optional	FL-3.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
17	a, c	a) Is correct. Defects found early are often much cheaper to remove than defects detected later in the lifecycle b) Is not correct. Dynamic testing still has its challenging, because they find other types of defects c) Is correct. Preventing defects in design or coding by uncovering omissions, inaccuracies, inconsistencies, ambiguities, and redundancies in requirements d) Is not correct. This is dynamic testing e) Is not correct. Static testing is important for safety-critical computer systems	FL-3.1.2	K2	1
18	d	a) Is not correct. It is described that the software architect must have completed the system specification b) Is not correct. 'Checklist-based', last sentence it is documented that you should also look for defects outside the checklist c) Is not correct. It is described: every reviewer did his review done comment d) Is correct. It is described that a checklist is available, but who provides the checklist?	FL-3.2.4	K3	1
19	c	a) Is not correct. This is error guessing b) Is not correct. This is black-box test technique c) Is correct. See reasons from incorrect answers d) Is not correct. This is exploratory testing	FL-4.x	K1	1
20	d	a) Is not correct. This is a white-box test technique b) Is not correct. This is a white-box test technique c) Is not correct. This is an experience-based test technique d) Is correct. Black-box test techniques are based on an analysis of the appropriate test basis (e.g. formal requirements documents, specifications, use cases, user stories)	FL-4.1.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
21	b	a) Is not correct. While the given statement is true, the explanation is not. The relationship between statement and decision coverage is misrepresented b) Is correct. Since any test case will cause the outcome of the "if" statement to be either TRUE or FALSE, by definition we achieved 50% decision coverage c) Is not correct. A single test case can give more than 25% decision coverage, this means according to the statement above always 50 % decision coverage d) Is not correct. The statement is specific and always true, because each test case achieves 50 % decision coverage	FL-4.3.2	K2	1
22	b	a) Is not correct. Statement coverage measures the percentage of statements exercised by test cases b) Is correct. Statement testing exercises the executable statements in the code. Statement coverage is measured as the number of statements executed by the tests divided by the total number of executable statements in the test object, normally expressed as a percentage c) Is not correct. The coverage does not measure pass/fail d) Is not correct. It is a metric and does not provide true/false statements	FL-4.3.1	K2	1
23	a	a) Is correct. The statement is true. Achieving 100% decision coverage guarantees 100% statement coverage b) Is not correct. The statement is false because achieving 100 % statement coverage does not in any case mean that the decision coverage is 100% c) Is not correct. The statement is false, because we can only do statements about 100% values d) Is not correct. The statement is false	FL-4.3.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
24	c	a) Is not correct. Exploratory testing is not suitable to speed up tests, which are already specified. It is most useful when there are few or inappropriate specified requirements or significant time pressure on testing b) Is not correct. The absence of a test charter, which may have been derived from the test analysis, is a poor precondition for the use of exploratory testing c) Is correct. Exploratory tests should be performed by experienced testers with knowledge of similar applications and technologies d) Is not correct. Explorative testing alone is not suitable to provide evidence that the test was very intensive, instead the evidence is provided in combination with other test methods	FL-4.4.2	K2	1

25	d	a) Is not correct. one too few (see the four correct partitions in d)
		b) Is not correct. one too much (see the four correct partitions in d)
		c) Is not correct. two too few (see the four correct partitions in d)
		d) Is correct. The 4 equivalence partitions correspond to the description in the question, i.e. at least one test case must be created for each equivalence partition
		    1. Equivalence partition: $0 \leq$ employment time ≤ 2.
		    2. Equivalence partition: $2 <$ employment time < 5.
		    3. Equivalence partition: $5 \leq$ employment time ≤ 10.
		    4. Equivalence partition: $10 <$ employment time.
			FL-4.2.1	K3	1

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

26	d	The following partitions can be identified:
		   1. <= 50, boundary value 50
		   2. 51 – 55 boundary values 51, 55
		   3. 56 – 60 boundary values 56, 60
		   4. >=61 boundary value 61
		Boundary value according to glossary V.3.2: A minimum or maximum value of an ordered equivalence partition
		Thus:
		a) Is not correct. Does not include all necessary boundary values, but it includes additional values: 0, 49, and 59, which are not boundary values in this equivalence partition
		b) Is not correct. Does not include all necessary boundary values. 51 and 55 are missing
		c) Is not correct. Does not include necessary boundary values but it includes additional values: 49, 62, and 54, which are not boundary values in this equivalence partition
		d) Is correct. includes all necessary boundary values
			FL-4.2.2	K3	1

27	d	a) Is not correct. If there was no agreement on targets, it is impossible to reach the targets. Since this situation can´t occur, this is not a scenario happening in reality b) Is not correct. The test case is objectively wrong, since under these conditions no bonus is paid because the agreed target was not reached c) Is not correct. There was no agreement on targets, it is impossible to reach the targets. Since this situation can´t occur, this is not a scenario happening in reality d) Is correct. The test case describes the situation that the too short period of employment and the non-fulfilment of the agreed target leads to non-payment of the bonus. This situation can occur in practice but is missing in the decision table	FL-4.2.3	K3	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
28	b	Proposed test case covers all five possible single valid transitions in the given state diagram (S1->S2, S2->S1, S2->S3, S3->S2, and S3->S1). a) Is not correct. Because no invalid transitions are covered b) Is correct. Because all valid transitions are covered c) Is not correct. Because all valid transitions are covered d) Is not correct. Because the test cases do not have pairs of transitions specified	FL-4.2.4	K3	1
29	c	a) Is not correct. See reason from correct answer b) Is not correct. See reason from correct answer c) Is correct. This is a case where the requirement gives an enumeration of discrete values. Each enumeration value is an equivalence class by itself; therefore, each will be tested when using equivalence partitioning test technique d) Is not correct. See reason from correct answer	FL-4.2.1	K3	1
30	b	a) Is not correct. Selection of tools is a test manager task b) Is correct. See reasons from incorrect answers c) Is not correct. The tester does not decide on the release of the test object d) Is not correct. The tester specifies the test cases, the test manager does the prioritization	FL-5.1.2	K1	1
31	a	a) Is correct. Test case execution (e.g. number of test cases run/not run, and test cases passed/failed) b) Is not correct. This metric can be measured, but its value is low. The number of testers does not give any information about the quality of the test object or test progress c) Is not correct. the coverage of requirements by source code is not measured during test execution. At most, the TEST(!) coverage of the code or requirements is measured d) Is not correct. This metric is part of test preparation and not test execution	FL-5.3.1	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
32	a, b	a) Is correct. Making decisions about what to test are documented in the test plan. This means when you are planning the test and there are budget limitations, prioritizing is needed; what should be tested and what should be omitted b) Is correct. See reasons from incorrect answers c) Is not correct. Test monitoring and control d) Is not correct. Common test metrics e) Is not correct. It is a part of test analysis	FL-5.2.1	K2	1
33	a	a) Is correct. See reasons from incorrect answers b) Is not correct. The "degree of tester's independence" does not play a role in exit criteria c) Is not correct. "Availability of test environment" is an entry criterion d) Is not correct. "The Qualification of Tester" is not a typical exit criterion	FL-5.2.3	K2	1

34	a	a) Is correct. This information has been defined earlier in the test project
		b) Is not correct. This information is included in a test report: information on what occurred during a test period
		c) Is not correct. This information is included in a test report:
		   • Status of testing and product quality with respect to the exit criteria or definition of done
		   • Metrics of defects, test cases, test coverage, activity progress, and resource consumption
		d) Is not correct. This information is included in a test report: Information and metrics to support recommendations and decisions about future actions, such as an assessment of defects remaining, the economic benefit of continued testing, outstanding risks, and the level of confidence in the tested software
			FL-5.3.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
35	b	The possible mappings of points 1 to 4 can be justified as follows: 1. Approach 3 is analytical: Risk-based testing is an example of an analytical approach, where tests are designed and prioritized based on the level of risk 2. Approach 2 is model-based: The control algorithms is 'modelled' on the server; therefore, it's tested with a model-based strategy 3. Approach 4 is consultative: This type of test strategy is driven primarily by the advice, guidance, or instructions of stakeholders, business domain experts, or technology experts, who may be outside the test team or outside the organization itself 4. Approach 1 is reactive: Exploratory testing is a common technique employed in reactive strategies, whereby the explorative testing is assigned to the experience-based testing category Thus: a) Is not correct b) Is correct c) Is not correct d) Is not correct	FL-5.2.2	K2	1
36	a	a) Is correct. The metrics-based approach: estimating the testing effort based on metrics of former similar projects or based on typical values b) Is not correct. This is expert-based approach: estimating the tasks based on estimates made by the owners of the tasks or by experts c) Is not correct. This is expert-based approach: estimating the tasks based on estimates made by the responsible team of the tasks or by experts d) Is not correct. This is expert-based approach: estimating the tasks based on estimates made by the owners of the tasks or by experts	FL-5.2.6	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
37	c	a) Is not correct. R4 is dependent on R2, so R2 should be tested before R4 b) Is not correct. R7 is dependent on R2, so R2 should be tested before R7 c) Is correct. The tests are specified in a sequence that takes the dependencies into account d) Is not correct. R2 is dependent on R3, so R3 should be tested before R2	FL-5.2.4	K3	1
38	b	a) Is not correct. The test result is given in the short summary b) Is correct. When testing different versions of software, identifying information is necessary c) Is not correct. You are just writing the defect report; hence, the status is automatically open d) Is not correct. This information is useful for the tester but does not need to be included in the defect report	FL-5.6.1	K3	1
39	d	a) Is not correct. The benefits are not when creating regressions tests, more in executing them b) Is not correct. This is done by configuration management tools c) Is not correct. This needs specialized tools d) Is correct. Reduction in repetitive manual work (e.g. running regression tests, environment set up/tear down tasks, re-entering the same test data, and checking against coding standards), thus saving time	FL-6.1.2	K1	1
40	a	a) Is correct. Code coverage measurement is mostly done on component level by developers b) Is not correct. Although used by developers it is used by testers as well c) Is not correct. Although used by developers it is used by testers as well d) Is not correct. Although used by developers it is used by testers as well	FL-6.1.1	K2	1