Sample Exam – Answers

Sample Exam set A
Version 1.1

ISTQB® Test Automation Engineering Syllabus Specialist

Compatible with Syllabus version 2016

International Software Testing Qualifications Board

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The ISTQB® Examination Working Group is responsible for this document.

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1.1	June 8, 2021	Update of Copyright Notice Update of layout
1.0	September 13, 2016	First version

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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

In this document you may find:

- Answer Key table, including for each correct answer:
  - K-level, Learning Objective, and Point value
- Answer sets, including for all questions:
  - Correct answer
  - Justification for each response (answer) option
  - K-level, Learning Objective, and Point value
- Additional answer sets, including for all questions [does not apply to all sample exams]:
  - Correct answer
  - Justification for each response (answer) option
  - K-level, Learning Objective, and Point value

- *Questions are contained in a separate document*

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Answer Key

Question Number (#)	Correct Answer	LO	K-Level	Points
1	b	ALTA-E-1.1.1	K2	1
2	a	ALTA-E-1.2.1	K2	1
3	a, d	ALTA-E-2.1.1	K4	3
4	b	ALTA-E-2.1.1	K4	3
5	b	ALTA-E-2.2.1	K4	3
6	a	ALTA-E-2.3.1	K2	1
7	b	ALTA-E-2.3.1	K2	1
8	c	ALTA-E-3.1.1	K2	1
9	d	ALTA-E-3.2.1	K4	3
10	b	ALTA-E-3.2.2	K2	1
11	d	ALTA-E-3.2.3	K2	1
12	c	ALTA-E-3.2.3	K2	1
13	c	ALTA-E-3.2.4	K4	3
14	d	ALTA-E-3.2.4	K4	3
15	b	ALTA-E-3.3.1	K3	2
16	b	ALTA-E-3.3.1	K3	2
17	a	ALTA-E-3.3.2	K2	1
18	b	ALTA-E-4.1.1	K3	2
19	c	ALTA-E-4.1.1	K3	2
20	a	ALTA-E-4.2.1	K4	3

Question Number (#)	Correct Answer	LO	K-Level	Points
21	a	ALTA-E-4.2.1	K4	3
22	b	ALTA-E-4.3.1	K2	1
23	b	ALTA-E-5.2.1	K3	2
24	d	ALTA-E-5.2.1	K3	2
25	b	ALTA-E-5.1.1	K2	1
26	a	ALTA-E-5.1.1	K2	1
27	d	ALTA-E-5.3.1	K4	3
28	b	ALTA-E-5.4.1	K2	1
29	d	ALTA-E-6.1.1	K3	2
30	c	ALTA-E-6.1.2	K2	1
31	d	ALTA-E-6.2.1	K2	1
32	c	ALTA-E-6.3.1	K2	1
33	b	ALTA-E-6.4.1	K2	1
34	c	ALTA-E-7.1.1	K3	2
35	c	ALTA-E-7.1.1	K3	2
36	c	ALTA-E-7.2.1	K3	2
37	a	ALTA-E-7.2.1	K3	2
38	a	ALTA-E-8.1.1	K4	3
39	d	ALTA-E-8.1.1	K4	3
40	c	ALTA-E-8.2.1	K4	3

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Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
1	b	a) Is not correct b) Is correct. There is an expectation with good test automation that the time required for test execution will be reduced while the overall test coverage is increased c) Is not correct d) Is not correct	ALTA-E-1.1.1	K2	1
2	a	a) Is correct. It must be designed for learnability, maintainability, and performance b) Is incorrect. Not all manual tests can or should be automated c) Is incorrect. The code could be self-documenting but the entire SUT would not be d) Is incorrect. Automation is easier with decoupling	ALTA-E-1.2.1	K2	1
3	a, d	a) Is correct. A is noted in section 3.2.3 of the syllabus where it talks about checking for security risks if you leave test interfaces in place b) Is not correct. We are testing the code, not the performance c) Is not correct. It is stated in the question that this is a long-lived, complex product d) Is correct. Developing custom test interfaces is considered a high level of intrusion and this may generate false alarms due to the different code being exercised e) Is not correct. The custom interfaces introduce a high level of intrusion	ALTA-E-2.1.1	K4	3
4	b	a) Is not correct. There is no reason to fully automate the testing of the third party system b) Is correct. If APIs are available automation at the API, level makes sense c) Is not correct. We are not testing the GUI of the third party software d) Is not correct. This is not a logical approach	ALTA-E-2.1.1	K4	3

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
5	b	a) Is not correct. The preferred tool meets your criteria, finding another tool may be difficult b) Is correct. Tools are often configurable and allow functionality to be hidden c) Is not correct. Training sessions take away from testing time and the need for training would continue for the life of the tool, which would be an expensive alternative d) Is not correct. Additional tool costs, configuration, and maintenance would make this an unacceptable alternative	ALTA-E-2.2.1	K4	3
6	a	a) Is correct. A system that allows visibility to the results of a test has the property of observability b) Is not correct. Because controllability is the ability of the interface to control behavior of the system c) Is not correct. Because they are quality characteristics rather than specific testability characteristics d) Is not correct. Because they are quality characteristics rather than specific testability characteristics	ALTA-E-2.3.1	K2	1
7	b	a) Is not correct. They are quality characteristics that will not necessarily influence testability b) Is not correct. They are quality characteristics that will not necessarily influence testability c) Is correct. This is necessary because it provides accessible interfaces d) Is not correct. This is not a legitimate term	ALTA-E-2.3.1	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
8	c	a) Is not correct. It provides the interface between the test automation and the SUT b) Is not correct. It may specify test cases but does not generate test cases c) Is correct. It supports generating test cases from models of the SUT and manual test case design d) Is not correct. This is not part of the gTAA structure	ALTA-E-3.1.1	K2	1
9	d	a) Is not correct. While these are certainly considerations for the implementation of the TAA, they will not help address the stated goals b) Is not correct. While these are certainly considerations for the implementation of the TAA, they will not help address the stated goals c) Is not correct. While these are certainly considerations for the implementation of the TAA, they will not help address the stated goals d) Is correct. Abstraction will likely be needed to accomplish the stated goals	ALTA-E-3.2.1	K4	3
10	b	a) Is not correct. Separating the two does not have anything to do with speed of execution b) Is correct. By separating the definition from the execution, the definition is immune from the tool selection and usage. If another tool is used, the definition does not have to change – only the execution layer will change. See section 3.1.1 c) Is not correct. Test cases are not added during execution d) Is not correct. Adaptation is supplied by the adaptation layer	ALTA-E-3.2.2	K2	1
11	d	a) Is not correct. This should be selected at the test execution layer b) Is not correct. This should be selected at the test definition layer c) Is not correct. This should be selected at the test generation layer d) Is correct. This is one of the considerations for the test adaptation layer	ALTA-E-3.2.3	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
12	c	a) A Is not correct. Consideration for standards and legal settings should have occurred before this time b) B Is not correct. Consideration for standards and legal settings should have occurred before this time c) Is correct. SUT standards and legal settings should be considered and any design requirements understood when designing the TAA d) D Is not correct. Consideration for standards and legal settings should have occurred before this time	ALTA-E-3.2.3	K2	1
13	c	a) Is not correct. This is not a real scripting type b) Is not correct. This could feed into the process-driven scripting c) Is correct. This will allow building on the structured scripting that has already been done and the libraries that have been created while automating the business processes d) Is not correct. It is referring to a more basic type of scripting and it has already been specified that structured scripting have been done	ALTA-E-3.2.4	K4	3
14	d	a) Is not correct. These are more complex techniques that would result in more sustainable code but the additional cost and complexity are not justified for this project b) Is not correct. These are more complex techniques that would result in more sustainable code but the additional cost and complexity are not justified for this project c) Is not correct. These are more complex techniques that would result in more sustainable code but the additional cost and complexity are not justified for this project d) Is correct. Little prep work is required and the maintenance concerns are not an issue for this project	ALTA-E-3.2.4	K4	3

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
15	b	a) Is not correct. You are still likely to need test data for your tests b) Is correct c) Is not correct. There is nothing in the question that indicates this is not needed d) Is not correct. It is not a component of the test execution layer	ALTA-E-3.3.1	K3	2
16	b	a) Is not correct. Because these components are still needed to create the TAS b) Is correct. A simulator is not needed because you can communicate directly with the external system c) Is not correct. Because these components are still needed to create the TAS d) Is not correct. Because these components are still needed to create the TAS	ALTA-E-3.3.1	K3	2
17	a	a) Is correct. Per the syllabus the TAA must designed for reuse but the TAS can increase the ability for reuse b) Is not correct. Only A contains the proper wording per the syllabus c) Is not correct. Only A contains the proper wording per the syllabus d) Is not correct. Only A contains the proper wording per the syllabus	ALTA-E-3.3.2	K2	1
18	b	a) Is not correct. This may result in great risk to the automation project if it fails b) Is correct. The pilot should have minimal impact upon normal business but should be conducted with a realistic project c) Is not correct. A trivial project will be of little benefit d) Is not correct. New projects are not good candidates for automation	ALTA-E-4.1.1	K3	2

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
19	c	a) Is not correct. Critical or trivial projects should not be used for a pilot b) Is not correct. Critical or trivial projects should not be used for a pilot c) Is correct. It is important to gather input from the stakeholders before moving forward d) Is not correct. This will occur, but the management report should not be prepared until there is feedback from the stakeholders	ALTA-E-4.1.1	K3	2
20	a	a) Is correct. The TAS must be modular for maintainability b) Is not correct. The TAS is an instantiation of the gTAA c) Is not correct. The two must reside in separate environments d) Is not correct. The TAS must separate the scripts from the TAF	ALTA-E-4.2.1	K4	3
21	a	a) Is correct. The TAS is like any other software and changes must be assessed to mitigate risk b) Is not correct. Procedures will change as the TAS changes c) Is not correct. Stubs and drivers should not be present in an active TAS d) Is not correct. System release notes of the SUT may have nothing to do with identifying vulnerabilities in the TAS	ALTA-E-4.2.1	K4	3
22	b	a) Is not correct. Using a standard naming convention will not affect any of these areas b) Is correct. Standard names will be easier for a new person to learn and will make the code easier to understand c) Is not correct. Using a standard naming convention will not affect any of these areas d) Is not correct. Using a standard naming convention will not affect any of these areas	ALTA-E-4.3.1	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
23	b	a) Is not correct. You can provide this information b) Is correct. This is an automated solution that will utilize the tools to provide accurate current and trend information c) Is not correct. It will provide only current execution information but no overall trending d) Is not correct. It is a manual process not an automated solution	ALTA-E-5.2.1	K3	2
24	d	a) Is not correct. It interferes with other planned activities b) Is not correct. This is an unnecessary cost c) Is not correct. It is not practical d) Is correct. Automated collection is inexpensive and effective	ALTA-E-5.2.1	K3	2
25	b	a) Is not correct. These will not allow quick analysis b) Is correct. Using colors, such as traffic lights, to indicate progress is mentioned in the syllabus c) Is not correct. These will not allow quick analysis d) Is not correct. The data would still have to be derived from the database before it could be analyzed	ALTA-E-5.1.1	K2	1
26	a	a) Is correct. Importing to commonly known tools such as Excel makes it easier for a broader audience to view and manipulate the data b) Is not correct. This would be inefficient and left to individual interpretation of the commentary c) Is not correct. This provides too much data for a general audience d) Is not correct. This would be an unrealistic expectation of a test-reporting tool. Specialized audio capture tools would be more practical	ALTA-E-5.1.1	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
27	d	a) Is not correct. The timing information is probably not pertinent and the SUT information is also probably not relevant to the problem although, if it is, it is likely it will be seen when the data in 1, 4, 5 is analyzed b) Is not correct. The timing information is probably not pertinent and the SUT information is also probably not relevant to the problem although, if it is, it is likely it will be seen when the data in 1, 4, 5 is analyzed c) Is not correct. The timing information is probably not pertinent and the SUT information is also probably not relevant to the problem although, if it is, it is likely it will be seen when the data in 1, 4, 5 is analyzed d) Is correct. This would be the most useful information. This is going to be a multi-step analysis starting with the first failure (which is probably at the step rather than test cases level) then replaying it to see what is actually happening and then looking at all the details of the failure	ALTA-E-5.3.1	K4	3
28	b	a) Is not correct. This is too specific b) Is correct. The test environment information is important in determining test coverage and test validity c) Is not correct. This information may be derived from the report, but is not a key attribute d) Is not correct. This level of detail would be in the defect report and not in a test execution report	ALTA-E-5.4.1	K2	1
29	d	a) Is not correct. They follow a mature process b) Is not correct. This is a good time to automate because the software is stable and the updates are made quarterly c) Is not correct. The software will be used frequently and for a long time d) Is correct. Because dealing with the data issue adds a level of complexity to the test automation. It is likely that it will need to create and maintain its own data and preserve this data across the production refreshes	ALTA-E-6.1.1	K3	2

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
30	c	a) Is not correct. These would not provide the basis for a test script b) Is not correct. These would not provide the basis for a test script c) Is correct. Automated test scripts are commonly written from manual test cases d) Is not correct. While it may provide the basis for the testing, it is not usually the basis for an automated test script	ALTA-E-6.1.2	K2	1
31	d	a) Is not correct. This will not give an indication of overall quality b) Is not correct. Both broad and deep are needed c) Is not correct. Both broad and deep are needed d) Is correct. Per the syllabus	ALTA-E-6.2.1	K2	1
32	c	a) Is not correct. They are not versed in the specific TAS design b) Is not correct. They are not versed in the specific TAS design c) Is correct. Test designers with domain expertise must ensure the TAS will work with the new features d) Is not correct. They are not versed in the specific TAS design	ALTA-E-6.3.1	K2	1
33	b	a) Is not correct. While there may be gaps in the test automation this is not the primary reason to automate confirmation testing b) Is correct. You are trying to be sure the fix works and make sure that the fix does not break later or get lost because of a configuration management problem c) Is not correct. The time spent finding the defect should have been justified by the severity of the defect d) Is correct. You are trying to be sure the fix works and make sure that the fix does not break later or get lost because of a configuration management problem e) Is not correct. This is a side effect and, while it does not test all the configuration management processes, it does make sure that the fix isn't lost for some reason	ALTA-E-6.4.1	K2	1

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
34	c	a) Is not correct. This would be limited in scope and would not provide sufficient coverage b) Is not correct. This would be limited in scope and would not provide sufficient coverage c) Is correct. This is the best option assuming you have picked a good set of tests. You want to test that good tests pass and failed tests fail d) Is not correct. You are looking for a quick test	ALTA-E-7.1.1	K3	2
35	c	a) Is not correct. This is not feasible b) Is not correct. Reverting to manual testing is not warranted c) Is correct; downloading a copy from a repository ensures a consistent TAS d) Is not correct. Historical data tracking will only illustrate the symptom of inconsistent results	ALTA-E-7.1.1	K3	2
36	c	a) Is not correct. They will not show any problems because the test results were all good when you ran the suite b) Is not correct. They will not show any problems because the test results were all good when you ran the suite c) Is correct. Given this information, the post conditions are not being checked correctly so test cases are being marked as passed even though something did not work correctly d) Is not correct. This is unlikely to change anything	ALTA-E-7.2.1	K3	2
37	a	a) Is correct. This is a recognized way to test automation suite b) Is not correct. Test data should already have been used to validate the TAS c) Is not correct. Historical test trends will not be useful in verifying the actual test results d) Is not correct. The speed of execution should not affect the accuracy of the testing results	ALTA-E-7.2.1	K3	2

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Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
38	a	a) Is correct. Per the syllabus this is a best practice b) Is not correct. These are still going to be duplicating processes, potentially c) Is not correct. These are still going to be duplicating processes, potentially d) Is not correct. There is no indication that the problem is due to better wait time	ALTA-E-8.1.1	K4	3
39	d	a) Is not correct. These do not directly enhance the API testing capabilities of the TAS b) Is not correct. These do not directly enhance the API testing capabilities of the TAS c) Is not correct. These do not directly enhance the API testing capabilities of the TAS d) Is correct. Modifying the adaptation layer to enable API testing will allow the TAS to access the plugins	ALTA-E-8.1.1	K4	3
40	c	a) Is not correct. While this is a good practice, new automation code is not being written b) Is not correct. Speed of change to the TAS is risky and there is no indication that leading edge practices will be more efficient c) Is correct. Using the latest DLLs tends to improve efficiency and effectiveness d) Is not correct. It might help identify inconsistencies, as it is not cost effective	ALTA-E-8.2.1	K4	3

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