

Sample Exam – Questions

Sample Exam set A
Version 1.3

ISTQB® Agile Technical Tester Syllabus Advanced Level

Compatible with Syllabus version 1.1

International Software Testing Qualifications Board



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

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

Acknowledgements

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Revision History

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Introduction

Purpose of this document

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

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

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

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

Instructions

In this document you may find:

- Questions¹, including for each question:
 - Any scenario needed by the question stem
 - Point value
 - Response (answer) option set
- Additional questions, including for each question [does not apply to all sample exams]:
 - Any scenario needed by the question stem
 - Point value
 - Response (answer) option set
- *Answers, including justification are contained in a separate document*

¹ In this sample exam the questions are sorted by the LO they target; this cannot be expected of a live exam.

Questions

Question #1 (3 Points)

Given the Epic:

“As the leader of the marketing department, I want to have a content management system so that my employees can edit and provide quality content to the readers”

Which of the following requirements engineering techniques would be the MOST effective for identifying and prioritizing user stories for the given Epic?

- a) Storyboarding
- b) Story mapping
- c) Defining Personas
- d) Class Diagrams
- e) Use Cases

Select TWO options.

Question #2 (3 Points)

You have to review the following user story that will be developed and tested during the next Sprint:

As a potential conference attendee, I want to be able to register for the conference online, so that registration is simple and paperless.

The following acceptance criteria are also mentioned:

- i. Payment can be made via PayPal, Debit or Credit Cards*
- ii. An acknowledgement email is sent to the attendee after submitting the form*
- iii. Protection against spam is working as expected*
- iv. Information from the form is stored in the registrations database*
- v. All incorrect user inputs are flagged by the system*

Which of the following correctly shows which acceptance criteria are testable?

- a) ii, iv, v are testable
- b) i, iii, v are testable
- c) i, ii, iv are testable
- d) iii, iv, v are testable

Select ONE option.

Question #3 (1 Point)

Which of the following correctly describes positive characteristic of unit tests?

- a) Unit tests should be independent from system components other than the one to be tested
- b) Unit test can be derived from the given epics and existing code of the test object
- c) While refactoring, the redesign of the unit test to adapt to the changed code is crucial
- d) A unit test should be written against large and complex code structures to get fast and feedback of the code quality

Select ONE option.

Question #4 (2 Points)

A developer has implemented a class that calculates if a given date is a leap year. The definition for the leap year is given:

Every year that is exactly divisible by four is a leap year, except for years that are exactly divisible by 100, but these centurial years are leap years if they are exactly divisible by 400.

- divisible by 4
- but not by 100
- years divisible by 400 are leap anyway

You have already thought about it and started with the first test class; the test class looks like (pseudo JavaScript used here):

```
// LeapYear.spec.js
describe('Leap year calculator', () => {
  it('should consider 1996 as leap', () => {
    expect(LeapYear.isLeap(1996)).toBe(true);
  });
});
```

What would now be your next step to proceed as efficient as possible, to validate the correctness of the class above?

- a) First write additional test classes to test also other relevant aspects of the leap year calculation
- b) First write code that covers other relevant aspects of the leap year calculation
- c) First write code that makes this test case fail
- d) First write code that makes this test case pass

Select ONE option.

Question #5 (3 Points)

You are responsible for defining the test approach for a safety critical cruise control system for a car.

Consider notation: ++ (highly recommended), + (recommended), o (neutral), - (not recommended), -- (not to be used).

Which of the following tables BEST defines the test approach for testing this system?

- a)
- | Risk Level | Specification based manual testing | Exploratory Testing | Automated Test Suites |
|------------|------------------------------------|---------------------|-----------------------|
| High | ++ | + | + |
| Medium | + | + | o |
| Low | -- | - | -- |
- b)
- | Risk Level | Specification based manual testing | Exploratory Testing | Automated Test Suites |
|------------|------------------------------------|---------------------|-----------------------|
| High | ++ | + | ++ |
| Medium | ++ | + | ++ |
| Low | + | + | + |
- c)
- | Risk Level | Specification based manual testing | Exploratory Testing | Automated Test Suites |
|------------|------------------------------------|---------------------|-----------------------|
| High | - | ++ | ++ |
| Medium | o | + | + |
| Low | + | ++ | + |
- d)
- | Risk Level | Specification based manual testing | Exploratory Testing | Automated Test Suites |
|------------|------------------------------------|---------------------|-----------------------|
| High | ++ | o | o |
| Medium | + | ++ | - |
| Low | - | ++ | - |

Select ONE option.

Question #6 (1 Point)

Which of the following statements about performing exploratory testing with test charters is correct?

- a) In contrast to black-box testing, the expected result is documented after a defect is found and not as part of test design
- b) Test charters are a useful tool to be used for testing when a detailed specification for the system under test is available
- c) The result of performing exploratory testing by using test charters is finding defects and specification defects
- d) Exploratory testing and black-box testing use the same metrics for measuring test coverage

Select ONE option.

Question #7 (1 Point)

Refactoring of test cases is needed in agile projects for many reasons.

Which of the following statements about the refactoring of test cases is correct?

- a) Refactoring of test cases is done to match and evolve the test cases due to changing functionality. The main benefits include improving the regression test cases and the continued alignment of the tests with the code base and product functionality
- b) Refactoring of test cases is needed because we cannot write and maintain detailed test cases in the short iterations associated with agile. The main benefits include aligning the pace of testing with development and the ability to quickly create new test cases
- c) In general, in the agile world refactoring is a way to clean up test cases by making them shorter. The main benefits include the ability to write test cases quickly, being able to test faster using short test cases, and being able to automate them quickly
- d) Refactoring of test cases is done as a process with the following steps: Identification, Refactor, Re-run, and Identify again. The main benefits include improving the regression test cases and maintaining the alignment of tests with the code base and product functionality

Select ONE option.

Question #8 (1 Point)

Summarize the characteristics of test automation in relation to development projects.

- a) Test automation can play an important role in test environment configuration and test release acquisition
- b) In large projects, there is usually one best solution that fits all needs, and so on dedicated test automation strategies fits best
- c) Test automation supports the goals of an iteration directly, e.g., by reducing the regression risk associated with stability of the system
- d) Supportive test automation effort must be done in the teams of the iteration teams themselves

Select ONE option.

Question #9 (1 Point)

An increased proportion of automated test coverage often leads to a greater degree of manual testing that follows reactive strategies, because:

- a) Many of the tests that can be prepared upfront, will be automated which enables the testers to spend more time for execution of manual tests
- b) An increase of the proportion of automated test increases test coverage, and the uncovered areas are to be tested reactively
- c) If the proportion of automated tests increases, manual tests focus on the riskiest areas which are identified reactively
- d) Reactive strategies consider the current context and status of the project and the system under test. To be able to adopt to this status most flexible a greater degree of manual testing is necessary

Select ONE option.

Question #10 (1 Point)

The challenges described below are of test automation in agile settings or agile projects. Which is the correctly described one?

- a) Resource's availability is a challenge in automating tests in agile settings, as they are needed to create, maintain, and execute the test suite
- b) Unit testing automation is the most critical test automation needed in agile and covers most of the testing challenges in agile quality of code and gives good test coverage
- c) Test deployment time is one of the challenges of agile testing, as deploying slow is not possible in short iterations
- d) Test Execution Time is not critical in agile as there are fewer tests written, and they are designed as checklists or high-level tests which reduces the time it takes to execute them

Select ONE option.

Question #11 (2 Points)

You are working in a project that developed a product that has reached a stable state and is deployed on different HW configurations all over Europe.

Your management decided to use your project as Proof of Concept for adopting CI as a new way of working. The POC was implemented on one set of hardware and was successful.

Which of the following actions is a good next step?

- a) Enable different test configurations in the CI process to test different configurations that are deployed in the market
- b) Speed up test execution by decreasing the amount of User Interface (UI) testing to get faster feedback from the CI tests
- c) Reduce the number of tests in the CI test suite, to improve the benefit of the CI approach
- d) Implement code to dynamically select CI tests, executing only test cases affected by changes

Select ONE option.

Question #12 (1 Point)

A Swiss Banking system uses the services of a third party service for executing some transactions. Is there a place for using service virtualization when testing this system?

- A. No, since the third party service is external to the system
- B. Yes, as it allows performing time controlled non-functional testing of the system
- C. Yes, as it simplifies the test environment of the third party component
- D. No, as such setup cannot simulate inherent network travel time of messages

Select ONE option.

Question #13 (1 Point)

Which of the following is a correct description of the Qualitative Questionnaire elicitation technique?

- a) Qualitative Questionnaire use a set of open-ended questions in order to add more quality to quantitative research. The qualitative questionnaire is more time consuming than other techniques, thus fits as an elicitation technique for small group of stakeholders
- b) Qualitative Questionnaire use data taken from close-ended questions to make comparisons between various data points. This will often provide data that can be included in a conclusion for an acceptance criterion
- c) Qualitative Questionnaire use Yes/No questions as an effective way to add more quality to quantitative research. They are best used as a follow-up to key questions. This could generate additional information for which new User Stories have to be created
- d) Qualitative Questionnaire use an interview to acquire information about backgrounds, contexts, and causes. It is likely to return good data, and acceptance criteria can be derived from the responses regarding the context of a user story

Select ONE option.

Question #14 (1 Point)

Which of the following sentences is correct with regards to Story Mapping?

- a) Story Mapping visualizes the order of priority of user stories, which mostly determines the effort to develop test cases for each story
- b) Story Mapping provides a detailed view of each user story which helps define the needed test levels
- c) Story Mapping provides a holistic view of the system which helps in defining the test strategy for the project
- d) Story Mapping visualizes the complexity of user stories which mostly determines the priority of test execution

Select ONE option.

Question #15 (1 Point)

You are developing test automation that implements a Regression-averse test strategy. Which of the following is an attribute that ESPECIALLY APPLIES to such implementation?

- a) the set of regression tests grows in line with the growing set of features implemented
- b) automated test cases from the set of regression tests are continuously improved and refactored
- c) automated test cases are implemented in a way supporting good maintainability
- d) the number of automated tests is limited by the number of tests given by the projects test pyramid

Select ONE option.

Question #16 (2 Points)

You are a QA manager of a project where each feature must be checked with a very large number of input combinations. You think the approach of data-driven testing could be the correct solution.

You want to prepare a Proof of Concept (PoC) to decide if using DDT technique would help or not.

Which is the best option from the list below?

- a) Ask the test automation team to create several TCs covering the different features, read the input data from a file and run the tests
- b) Ask the test automation team to adapt some existing TCs to work with given test data
- c) Ask the test automation team to prepare a TC for one of the features, read a sample of the input data and execute the test
- d) Ask the test automation team to prepare a general TC which reads the input data from file and executes all the tests

Select ONE option.

Question #17 (1 Point)

Which of the following sentences about continuous testing and continuous delivery are correct?

- a) Tester performs daily test execution at a pre-set time as part of continuous delivery
- b) Tests are executed each time a new version of code is submitted by the developer
- c) Developers update the code repository with the daily code modifications at fixed intervals
- d) Automated deployment of a new version is set to take place at least once a day
- e) Application deployment is triggered each time the continuous testing passes successfully

Select TWO options.

Question #18 (1 Point)

Which of the following sentences best describes a virtualized service?

- a) A virtual machine, which is setup to accomplish several services, to be used by several users at the same time
- b) A process which simulates the relevant behavior of a real service. It can be accessed simultaneously by several users
- c) A physical system, which simulates the relevant behavior of a real service. It can be accessed simultaneously by several users
- d) An installation of multiple virtual machines, which are setup to accomplish one service, to be used by several users at the same time

Select ONE option.

Question #19 (1 Point)

Which of the following describes using Personas for requirements specification?

- a) Analyze how Laura, an online marketeer, will interact with the system to identify acceptance criteria
- b) Visualize the group of user stories that Laura will work with
- c) Selecting the right test approach for online marketeers based on the visual aspect on the system
- d) Describe the sequence of system operations carried out when Laura uses the system

Select ONE option.

Question #20 (2 Points)

Scenario 1:

You, as a tester in a BDD environment, know that the following user story must be implemented and tested:

*As a store owner,
I want to keep track of my inventory when items are returned or exchanged,
so that I can track inventory.*

Assuming that I have the following items in stock: 12 T-shirts, 10 sweaters, 2 hats, 7 skirts.

Which of the following Scenarios should NOT be used as the basis for generating test cases for this user story?

- a) Given that a customer previously bought 2 T-shirts from me, when they return the T-shirts for a refund, then I should have 14 T-shirts in the inventory.
- b) Given that a customer previously bought 1 hat from me, when they exchange the hat for a skirt, then I should have 3 hats and 6 skirts in the inventory.
- c) Given that a customer previously bought 2 sweaters from me, when they exchange the sweaters for a hat, then I should have 12 sweaters and 1 hat in the inventory.
- d) Given that a customer previously bought 3 skirts from me, when they return these skirts for a refund, then I should have 4 skirts in the inventory.

Select ONE option.