Sample Exam - Questions

ISTQB® Certified Tester Syllabus

Foundation Level

Exam ID: C

Version 1.1

International Software Testing Qualifications Board

Release Date: May 29, 2019

Legal

Exam Working Group 2019

Document Responsibility

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

Acknowledgements

This document was produced by a core team from the International Software Testing Qualifications Board Examination Working Group: Rex Black

The core team thanks the Examination Working Group review team, the Syllabus Working Group and the National Boards for their suggestions and input.

Revision History

Version	Date	Remarks
1.4	May 23, 2019	Sample Exam – Questions Layout Template used
1.0	May 3, 2019	Release at Yerevan GA
1.1	May 29, 2019	Cosmetic and wording fixes

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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 question set is organized in the following way:

- Question - including any scenario followed by the question stem
- Answer Set

- Answers, including justification are contained in a separate document

Questions

Question #1 (1 Point)

What is quality?

a) Part of quality management focused on providing confidence that quality requirements will be fulfilled.
b) The degree to which a component, system or process meets specified requirements and/or user/customer needs and expectations.
c) The degree to which a component or system protects information and data so that persons or other components or systems have the degree of access appropriate to their types and levels of authorization.
d) The total costs incurred on quality activities and issues and often split into prevention costs, appraisal costs, internal failure costs and external failure costs.

Select ONE option.

Question #2 (1 Point)

Which of the following is a typical test objective?

a) Preventing defects
b) Repairing defects
c) Comparing actual results to expected results
d) Analyzing the cause of failure

Select ONE option.

Question #3 (1 Point)

A phone ringing in an adjac
ent cubicle momentarily distracts a programmer, causing the programmer to improperly program the logic that checks the upper boundary of an input variable. Later, during system testing, a tester notices that this input field accepts invalid input values. The improperly coded logic for the upper boundary check is:

a) The root cause
b) The failure
c) The error
d) The defect

Select ONE option.

Question #4 (1 Point)

A product owner says that your role as a tester on an Agile team is to catch all the bugs before the end of each iteration. Which of the following is a testing principle that could be used to respond to this statement?

a) Defect clustering
b) Testing shows the presence of defects
c) Absence of error fallacy
d) Root cause analysis

Select ONE option.

Question #5 (1 Point)

Programmers often write and execute unit tests against code which they have written. During this self-testing activity, which of the following is a tester mindset that programmers should adopt to perform this unit testing effectively?

a) Good communication skills
b) Code coverage
c) Evaluating code defects
d) Attention to detail

Select ONE option.

Question #6 (1 Point)

Consider the following testing activities:

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

Consider the following ways traceability can help testing:

A. Improve understandability of test status reports to include status of test basis items
B. Make testing auditable
C. Provide information to assess process quality
D. Analyze the impact of changes

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

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

Select ONE option.

Question #7 (1 Point)

A tester participated in a discussion about proposed database structure. The tester identified a potential performance problem related to certain common user searches. This possible problem was explained to the development team. Which of the following is a testing contribution to success that BEST matches this situation?

a) Enabling required tests to be identified at an early stage
b) Ensuring processes are carried out properly
c) Reducing the risk of fundamental design defects
d) Reducing the risk of untestable functionality

Select ONE option.

Question #8 (1 Point)

Which of the following is an example of a task that can be carried out as part of the test process?

a) Analyzing a defect
b) Designing test data
c) Assigning a version to a test item
d) Writing a user story

Select ONE option.

Question #9 (1 Point)

You are running a performance test with the objective of finding possible network bottlenecks in interfaces between components of a system. Which of the following statements describes this test?

a) A functional test during the integration test level
b) A non-functional test during the integration test level
c) A functional test during the component test level
d) A non-functional test during the component test level

Select ONE option.

Question #10 (1 Point)

Which of the following statements is true?

a) Impact analysis is useful for confirmation testing during maintenance testing
b) Confirmation testing is useful for regression testing during system design
c) Impact analysis is useful for regression testing during maintenance testing
d) Confirmation testing is useful for impact analysis during maintenance testing

Select ONE option.

Question #11 (1 Point)

Consider the following types of defects that a test level might focus on:

1. Defects in separately testable modules or objects
2. Not focused on identifying defects
3. Defects in interfaces and interactions
4. Defects in the whole test object

Which of the following list correctly matches test levels from the Foundation syllabus with the defect focus options given above?

a) 1 = performance test; 2 = component test; 3 = system test; 4 = acceptance test
b) 1 = component test; 2 = acceptance test; 3 = system test; 4 = integration test
c) 1 = component test; 2 = acceptance test; 3 = integration test; 4 = system test
d) 1 = integration test; 2 = system test; 3 = component test; 4 = acceptance test

Select ONE option.

Question #12 (1 Point)

A mass market operating system software product is designed to run on any PC hardware with an x86-family processor. You are running a set of tests to look for defects related to support of the various PCs that use such a processor and to build confidence that important PC brands will work. What type of test are you performing?

a) Performance test
b) Processor test
c) Functional test
d) Portability test

Select ONE option.

Question #13 (1 Point)

During an Agile development effort, a product owner discovers a previously-unknown regulatory requirement that applies to most of the user stories within a particular epic. The user stories are updated to provide for the necessary changes in software behavior. The programmers on the team are modifying the code appropriately. As a tester on the team, what types of tests will you run?

a) Confirmation tests
b) Regression tests
c) Functional tests
d) Change-related tests

Select ONE option.

Question #14 (1 Point)

In a formal review, what is the role name for the participant who runs an inspection meeting?

a) Facilitator
b) Programmer
c) Author
d) Project manager

Select ONE option.

Question #15 (1 Point)

You are reading a user story in the product backlog to prepare for a meeting with the product owner and a developer, noting potential defects as you go. Which of the following statements is true about this activity?

a) It is not a static test, because static testing involves execution of the test object
b) It is not a static test, because static testing is always performed using a tool
c) It is a static test, because any defects you find could be found cheaper during dynamic testing
d) It is a static test, because static testing does not involve execution of the test object.

Select ONE option.

Question #16 (1 Point)

During a period of intensive project overtime, a system architecture document is sent to various project participants, announcing a previously-unplanned technical review to occur in one week. No adjustments are made to the participants' list of assigned tasks. Based on this information alone, which of the following is a factor for review success that is MISSING?

a) Appropriate review type
b) Adequate time to prepare
c) Sufficient metrics to evaluate the author
d) Well-managed review meeting

Select ONE option.

Question #17 (1 Point)

You are working as a tester on an Agile team, and have participated in over two dozen user story refinement sessions with the product owner and the developers on the team at the start of each iteration. As the reviews have gotten more effective at detecting defects in user stories and the product owner more adept at correcting those defects, you and the team notice that the team's velocity, as shown in your burndown charts, has started to increase. Which of the following is a benefit of static testing that MOST DIRECTLY applies to increased velocity?

a) Increasing total cost of quality
b) Reducing testing cost
c) Increasing development productivity
d) Reducing total cost of quality

Select ONE option.

Question #18 (1 Point)

You are working on a video game development project, using Agile methods. It is based on Greek mythology and history, and players can play key roles in scenarios such as the battles between the Greeks and Trojans.

Consider the following user story and its associated acceptance criteria:

As a player,
I want to be able to acquire the Rod of Midas (a new magic object),
so that I can turn objects and other players into gold
AC1: The Rod must work on any object or player, no matter what size, which can be touched anywhere by the player holding the Rod
AC2: Holding the Rod does not change the player holding it into gold
AC3: Any object or player touched by the Rod transforms completely into gold within one millisecond
AC4: The Rod appears as shown in Prototype O.W.RoM
AC5: The transformation starts at the point of contact with the Rod and moves at a rate of one meter per millisecond

You are participating in a checklist-based review session of this user story.

This user story and its associated acceptance criteria contain which of the following typical defects identified by static testing in this type of work product?

a) Deviation from standards
b) Contradiction
c) Security vulnerability
d) Coverage gaps

Select ONE option.

Question #19 (1 Point)

What is decision coverage?

a) The percentage of condition outcomes that have been exercised by a test suite
b) Decision coverage is a synonym for statement coverage
c) The percentage of executable statements that have been exercised by a test suite
d) The percentage of decision outcomes that have been exercised by a test suite

Select ONE option.

Question #20 (1 Point)

Prior to an iteration planning session, you are studying a user story and its acceptance criteria, deriving test conditions and associated test cases from the user story as a way of applying the principle of early QA and test. What test technique are you applying?

a) White-box
b) Black-box
c) Experience-based
d) Error guessing

Select ONE option.

Question #21 (1 Point)

Which of the following is a true statement about exploratory testing?

a) More experienced testers who have tested similar applications and technologies are likely to do better than less experienced testers at exploratory testing
b) Exploratory testing does not identify any additional tests beyond those that would result from formal test techniques
c) The time required to complete an exploratory testing session cannot be predicted in advance
d) Exploratory testing can involve the use of black-box techniques but not white-box techniques

Select ONE option.

Question #22 (1 Point)

You are testing a mobile app that allows customers to access and manage their bank accounts. You are running a test suite that involves evaluating each screen and each field on each screen against a general list of user interface best practices, derived from a popular book on the topic, that maximize attractiveness, ease-of-use, and accessibility for such apps. Which of the following options BEST categorizes the test technique you are using?

a) Specification-based
b) Exploratory
c) Checklist-based
d) Error guessing

Select ONE option.

Question #23 (1 Point)

Consider a mobile app that allows customers to access and manage their bank accounts. A user story has just been added to the set of features that checks customers' social media accounts and bank records to give personalized greetings on birthdays and other personal milestones. Which of the following test techniques could a PROGRAMMER use during a unit test of the code to ensure that coverage of situations when the greetings ARE supposed to occur and when the greetings ARE NOT supposed to occur?

a) Statement testing
b) Exploratory testing
c) State transition testing
d) Decision testing

Select ONE option.

Question #24 (1 Point)

A batch application has been in production unchanged for over two years. It runs overnight once a month to produce statements that will be e-mailed to customers. For each customer, the application goes through every account and lists every transaction on that account in the last month. It uses a nested-loop structure to process customers (outer loop), each customer's accounts (middle loop), and each account's transactions (inner loop).

One night, the batch application terminates prematurely, failing to e-mail statements to some customers, when it encounters a customer with one account for which no transactions occurred in the last month. This is a very unusual situation and has not occurred in the years since this application was placed in production.

While fixing the defect, a programmer asks you to recommend test techniques that are effective against this kind of defect. Which of the following test techniques would **most** likely have been able to detect the underlying defect?

a) Decision testing
b) Statement testing
c) Checklist-based testing
d) Error guessing

Select ONE option.

Question #25 (1 Point)

You are testing an unattended gasoline pump that only accepts credit cards. Once the credit card is validated, the pump nozzle placed into the tank, and the desired grade selected, the customer enters the desired amount of fuel in gallons using the keypad. The keypad only allows the entry of digits. Fuel is sold in tenths (0.1) of a gallon, up to 50.0 gallons.

Which of the following is a minimum set of desired amounts that covers the **equivalence partitions** for this input?

a) 0.0, 20.0, 60.0
b) 0.0, 0.1, 50.0
c) 0.0, 0.1, 50.0, 70.0
d) -0.1, 0.0, 0.1, 49.9, 50.0, 50.1

Select ONE option.

Question #26 (1 Point)

You are testing an e-commerce system that sells cooking supplies such as spices, flour, and other items in bulk. The units in which the items are sold are either grams (for spices and other expensive items) or kilograms (for flour and other inexpensive items). Regardless of the units, the smallest valid order amount is 0.5 units (e.g., half a gram of cardamom pods) and the largest valid order amount is 25.0 units (e.g., 25 kilograms of sugar). The precision of the units field is 0.1 units.

Which of the following is a set of input values that cover the boundary values with two-point boundary values for this field?

a) 0.3, 10.0, 28.0
b) 0.4, 0.5, 0.6, 24,9,25,0, 25.1
c) 0.4, 0.5, 25.0 25.1
d) 0.5, 0.6, 24.9, 25.0

Select ONE option.

Question #27 (1 Point)

Consider the following decision table for the portion of an online airline reservation system that allows frequent flyers to redeem points for reward travel:

Condition	1	2	3
Account/password okay	N	Y	Y
Sufficient points	-	N	Y
Action			
Show flight history	N	Y	Y
Allow reward travel	N	N	Y

Suppose that there are two equivalence partitions for the condition where *Account/password okay* is not true, one where the account is invalid and another where the account is valid but the password is invalid. Suppose that there is only one equivalence partition corresponding to the condition where *Account/password okay* is true, where both the account and password are valid.

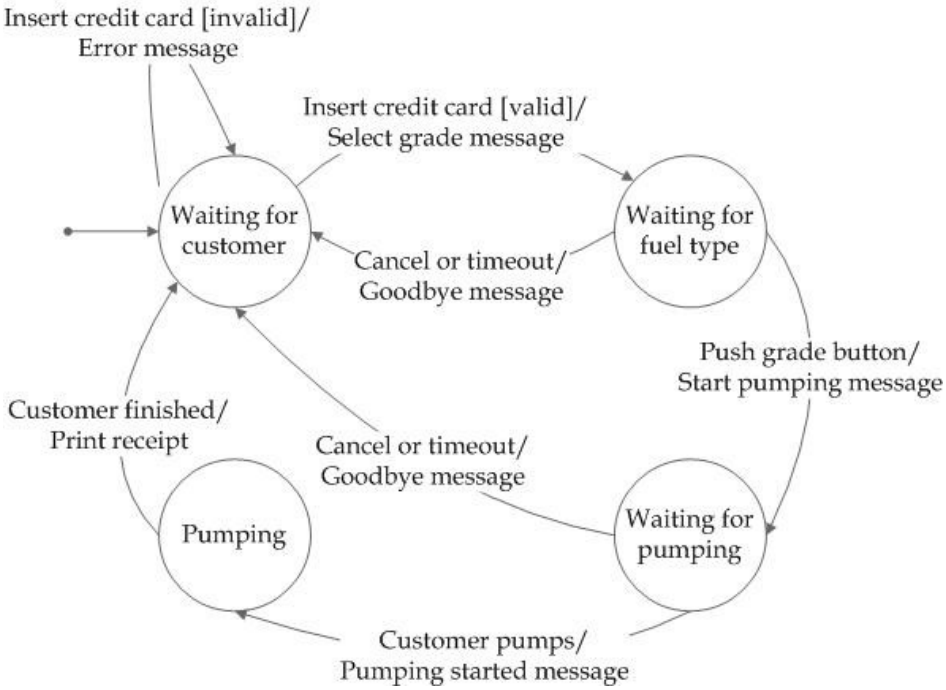
If you want to design tests to cover the equivalence partitions for *Account/password okay* and also for this portion of the decision table, what is the minimum number of tests required?

a) 2
b) 3
c) 4
d) 9

Select ONE option.

Question #28 (1 Point)

Consider the following state transition diagram for a credit-card only, unattended gasoline pump:



Assume that you want to develop the minimum number of tests to cover each transition in the state transition diagram. Assume further that each test must start at the beginning state, *Waiting for customer*, and each test ends when a transition arrives at the beginning state. How many tests do you need?

a) 4
b) 7
c) 1
d) Infinite

Select ONE option.

Question #29 (1 Point)

You are testing an e-commerce system that sells cooking supplies such as spices, flour, and other items in bulk. The units in which the items are sold are either grams (for spices and other expensive items) or kilograms (for flour and other inexpensive items). Regardless of the units, the smallest valid order amount is 0.5 units (e.g., half a gram of cardamom pods) and the largest valid order amount is 25.0 units (e.g., 25 kilograms of sugar). The precision of the units field is 0.1 units.

Which of the following is a MINIMAL set of input values that cover the **equivalence partitions** for this field?

a) 10.0, 28.0
b) 0.4, 0.5, 25.0, 25.1
c) 0.2, 0.9, 29.5
d) 12.3

Select ONE option.

Question #30 (1 Point)

You are working as a tester on an online banking system. Availability is considered one of the top product (quality) risks for the system. You find a reproducible failure that results in customers losing their connections to the bank Web site when transferring funds between common types of accounts and being unable to reconnect for between three and five minutes.

Which of the following would be a good summary for a defect report for this failure, one that captures both the essence of the failure and its impact on stakeholders?

a) Web server logs show error 0x44AB27 when running test 07.005, which is not an expected error message in /tmp filesystem
b) Developers have introduced major availability defect which will seriously upset our customers
c) Performance is slow and reliability flaky under load
d) Typical funds-transfer transaction results in termination of customer session, with a delay in availability when attempting to reconnect

Select ONE option.

Question #31 (1 Point)

You are testing a mobile app that allows users to find a nearby restaurant, based on the type of food they want to eat. Consider the following list of test cases, priorities (smaller number is high priority), and dependencies, in the following format:

Test case number	Test condition covered	Priority	Logical dependency
01.001	Select type of food	3	none
01.002	Select restaurant	2	01.001
01.003	Get directions	1	01.002
01.004	Call restaurant	1	01.002
01.005	Make reservation	3	01.002

Which of the following is a possible test execution schedule that considers both priorities and dependencies?

a) 01.001, 01.002, 01.003, 01.005, 01.004
b) 01.001, 01.002, 01.004, 01.003, 01.005
c) 01.003, 01.004, 01.002, 01.001, 01.002
d) 01.001, 01.002, 01.004, 01.005, 01.003

Select ONE option.

Question #32 (1 Point)

Which of the following is a common test metric often used to monitor BOTH test preparation and test execution?

a) Test case status
b) Defect find/fix rates
c) Test environment preparation
d) Estimated cost to find the next defect

Select ONE option.

Question #33 (1 Point)

Which of the following are two factors that can be used to determine the level of risk?

a) Testing and development
b) Dynamic and reactive
c) Statement and decision
d) Likelihood and impact

Select ONE option.

Question #34 (1 Point)

You are working as a project manager on an in-house banking software project. To prevent rework and excessive find/fix/retest cycles, the following process has been put in place for resolving a defect once it is found in the test lab:

1. The assigned developer finds and fixes the defect, then creates an experimental build
2. A peer developer reviews, unit tests, and confirmation tests the defect fix on his/her desktop
3. A tester—usually the one who found the defect—confirmation tests the defect fix in the development environment
4. Once a day, a new release with all confirmed defect fixes included, is installed in the test environment
5. The same tester from step 3 confirmation tests the defect fix in the test environment

Nevertheless, a large number of defects which the testers confirmed as fixed in the development environment (in step 3) are somehow failing confirmation testing in the test environment, with the resulting rework and cycle time outcomes. You have the highest confidence in your testers, and have ruled out mistakes or omissions in step 3.

Which of the following is the MOST likely part of the process to check next?

a) The developers, who may not be adequately testing in step 2
b) The testers, who may be confused about what to test in step 5
c) Configuration management, which may not be maintaining the integrity of the product in step 4
d) The developers, who may not be fixing defects properly in step 1

Select ONE option.

Question #35 (1 Point)

You are engaged in planning a test effort for a new mobile banking application. As part of estimation, you first meet with the proposed testers and others on the project. The team is well-coordinated and has already worked on similar projects. To verify the resulting estimate, you then refer to some industry averages for testing effort and costs on similar projects, published by a reputable consultant.

Which statement accurately describes your estimation approach?

a) A simultaneous expert-based and metrics-based approach
b) Primarily an expert-based approach, augmented with a metrics-based approach
c) Primarily a metrics-based approach, augmented with an expert-based approach
d) Primarily planning poker, checked by velocity from burndown charts.

Select ONE option.

Question #36 (1 Point)

During a project following Agile methods, you find a discrepancy between the developer's interpretation of an acceptance criteria and the product owner's interpretation, which you bring up during a user story refinement session. Which of the following is a benefit of test independence exemplified by this situation?

a) Recognizing different kinds of failures
b) Taking primary responsibility for quality
c) Removing a defect early
d) Challenging stakeholder assumptions

Select ONE option.

Question #37 (1 Point)

You are defining the process for carrying out product risk analysis as part of each iteration on an Agile project. Which of the following is the proper place to document this process in a test plan?

a) Scope of testing
b) Approach of testing
c) Metrics of testing
d) Configuration management of the test object

Select ONE option.

Question #38 (1 Point)

Consider the following list of undesirable outcomes that could occur on a mobile app development effort:

A. Incorrect totals on reports
B. Change to acceptance criteria during acceptance testing
C. Users find the soft keyboard too hard to use with your app
D. System responds too slowly to user input during search string entry
E. Testers not allowed to report test results in daily standup meetings

Which of the following properly classifies these outcomes as project and product risks?

a) Product risks: B, E; Project risks: A, C, D
b) Product risks: A, C, D; Project risks: B, E
c) Product risks: A, C, D, E Project risks: B
d) Product risks: A, C Project risks: B, D, E

Select ONE option.

Question #39 (1 Point)

You have just completed a pilot project for a regression testing tool. You understand the tool much better, and have tailored your testing process to it. You have standardized an approach to using the tool and its associated work products. Which of the following is a typical test automation pilot project goal that remains to be carried out?

a) Learn more details about the tool
b) See how the tool would fit with existing processes and practices
c) Decide on standard ways of using, managing, storing, and maintaining the tool and the test assets
d) Assess whether the benefits will be achieved at reasonable cost

Select ONE option.

Question #40 (1 Point)

Which of the following tools is most useful for reporting test metrics?

a) Test management tool
b) Static analysis tool
c) Coverage tool
d) Security tool

Select ONE option.