



**Swedish Software Testing Board (SSTB)
International Software Testing Qualifications Board (ISTQB)**

Agile Tester Certificate in Software Testing

Practice Examination Questions

2015-03-09

Time allowed: 1 hour 15 minutes

**There are 40 questions, each question 1 point
You need 26 points or more to pass**

You have to follow directives given to you by the invigilator during the whole exam

Mark your answers within the marked area in the provided answer sheet. Try to answer all 40 questions. Mark only one answer per question. Erase any answer you decide to change and mark your new chosen answer clearly.

You are not allowed to keep the questionnaire, other documents or notes. All papers must be handed back to the invigilator at the end of the exam.

<p>1.</p>	<p>The Agile Manifesto has 4 statements of values. Which one of the following alternatives matches the agile value on the left (1-4) with its traditional counterpart on the right (i-iv)?</p> <p>1) Customer collaboration over 2) Responding to change over 3) Individuals and interactions 4) Working software over</p> <p>i) Processes and tools ii) Following a plan iii) Contract negotiation iv) Comprehensive documentation</p> <p>a) 1 – iv, 2 – ii, 3 – i, 4 – iii b) 1 – iii, 2 – ii, 3 – i, 4 – iv c) 1 – iii, 2 – iv, 3 – ii, 4 – i d) 1 – ii, 2 – iii, 3 – iv, 4 – i</p>
<p>2.</p>	<p>Which of the following statements best reflects one of the values of the Agile Manifesto?</p> <p>a) Business representatives should provide a backlog of user stories and their estimates to the team b) Working software allows the customer to provide rapid feedback to the developer c) Developers should use unit testing tools to support the testing process d) Adopting plans to change adds no real value to an agile project</p>
<p>3.</p>	<p>Which activity below best represents responsibilities that are consistent with agile development's Whole Team approach?</p> <p>a) Developers are expected to test non-functional requirements (performance, usability, security, etc.) b) Testers are responsible for developing unit tests which they pass on to the developers for testing c) Testers are expected to work with customer representatives to create acceptance tests d) Business representatives are expected to select the tools the team will use during the project</p>
<p>4.</p>	<p>Which of the following is an advantage of having the whole team responsible for quality?</p> <p>a) Companies no longer need to recruit and train software testing specialists b) Role barriers are eliminated and team members contribute to project success based on their unique skills and perspectives c) Project costs are lower because the need for a specialized test team is eliminated d) Test automation tasks are now the responsibility of the development team instead of the test team</p>

5.	Which TWO of the following statements are true? 1) Early feedback gives the developers more time to develop new system features because they spend less time reworking features delivered in earlier iterations. 2) Early feedback enables agile teams to deliver features with the highest business value first, because the customer maintains focus on features with the highest business value. 3) Early feedback reduces costs because it decreases the amount of time needed for system testing. 4) Early feedback makes it more likely that the system built is what the customer wanted because they are given the opportunity to make changes throughout the product development process. a) 1 and 3 b) 1 and 4 c) 2 and 4 d) 2 and 3
6.	Which of the following is a benefit of the agile process promoting early and frequent feedback? a) It is easy to determine the developer who introduces the most defects when integrating code b) There is enough time to complete all features scheduled for the given iteration c) There is less rework because customers see the product regularly d) The total number of defects found during the project is much higher than on traditional software development projects such as waterfall

<p>7.</p>	<p>Match the following agile software development approaches on the top with their corresponding descriptions on the bottom.</p> <ul style="list-style-type: none">1) Extreme Programming2) Scrum3) Kanban <ul style="list-style-type: none">i. Embraces 5 values to guide development: Communication, Simplicity, Feedback, Courage, and Respectii. Divides the project into short iterations called sprints.iii. Optimizes the 'flow' of work in a value-added chain. <ul style="list-style-type: none">a) 1-iii, 2-ii, 3-ib) 1-ii, 2-i, 3-iiic) 1-i, 2-iii, 3-iid) 1-i, 2-ii, 3-iii
<p>8.</p>	<p>During an iteration planning meeting, the team is sharing their thoughts about a user story.</p> <p>The product owner advises that the customer should have one screen to enter information. The developer explains that there are technical limitations for the feature, due to the amount of information needed to be captured on the screen. Another developer says that there are risks about performance as the information will be stored in an external offsite database.</p> <p>Which of the following would best represent a tester's contribution to this discussion?</p> <ul style="list-style-type: none">a) The tester advises that usability is more important than performanceb) The tester advises that the screen for the user story needs to be a single page to reduce test automation effortc) The tester advises that performance acceptance criteria should standard maximum of 1 second for data storaged) The tester advises that the user story needs acceptance criteria to be testable

9.	Which of the following BEST describes a tester participating in a retrospective meeting? a) As a tester, I should only attend and participate in a retrospective meeting if I have any feedback and input related to activities conducted by the team during the sprint b) As a tester participating in a retrospective meeting, I should bring in topics that are related to testing only. All other topics will be covered by different participants c) As a tester, I participate in a retrospective meeting as an observer, ensuring that the meeting follows the retrospective rules and agile values d) As a tester participating in a retrospective meeting, I should provide feedback and input on all activities conducted by the team during the sprint
10.	Which of the following items should NOT be raised during a retrospective meeting? a) The build process is manual and takes too long. Research and implementation of an automated build framework should be done b) Tester XYZ is struggling to find defects. Test design training is required for this resource c) There should be more emphasis on unit testing in the future, to improve overall quality d) Automated regression test suites are taking too long to run. A review of the tests, to eliminate redundant or unnecessary tests, is required
11.	Which of the following is <u>NOT</u> a principle of continuous integration? a) Continuous integration ensures that testing of builds is done manually, as this generates more reliable results than automated scripts b) Continuous integration allows new builds to be available frequently to testers and stakeholders c) Continuous integration helps to identify new integration defects early and makes the analysis of these defects easier d) Continuous integration helps to build changed software regularly, including testing and deploying, in an automated way
12.	Which of the following activities would a tester do during release planning? a) Estimate testing tasks generated by new features planned for this iteration b) Produce a list of acceptance tests for user stories c) Help break down user stories into smaller and more detailed tasks d) Support the clarification of the user stories and ensure that they are testable

<p>13.</p>	<p>What is the most appropriate explanation of a ‘user story’?</p> <ul style="list-style-type: none"> a) An artifact documented by business representatives to help developers and testers understand the system requirements b) An artifact written collaboratively by developers, testers, and business representatives to capture requirements c) An artifact that the tester must review and sign off before testing can begin d) An artifact used to detail only the functional requirements of the system
<p>14.</p>	<p>Which of the following test activities is typically done during agile projects, but is not as common on traditional projects?</p> <ul style="list-style-type: none"> a) Testers write detailed test plans so all team members can understand what will be tested during each iteration b) Testers are involved in the development to better understand what needs to be tested c) Testers decide entry and exit criteria for each test level d) Testers are heavily involved in the creation of automated test cases which are then used to verify the implementation of the requirements.
<p>15.</p>	<p>Consider the following activities:</p> <ul style="list-style-type: none"> i. Strict enforcement of system test level entry and exit criteria. ii. Collaboration between tester, developer, and business stakeholders to define acceptance criteria. iii. Functional verification testing of user stories developed in the previous iteration. <p>Which of the following combination of these activities should occur in an agile project?</p> <ul style="list-style-type: none"> a) ii only b) ii and iii c) i and ii d) iii only
<p>16.</p>	<p>Which one of the following statements is true on agile projects?</p> <ul style="list-style-type: none"> a) Developers should rely on testers to create the automated regression tests b) Testers should work closely with developers while retaining an objective outlook c) There is no difference between what testers and developers do on agile projects d) Test managers do not exist in organizations doing agile development

<p>17.</p>	<p>Which of the following statements about independent testing on agile projects is FALSE?</p> <ul style="list-style-type: none"> a) Independent testers will find more defects than developers regardless of test level b) Independent testing can be introduced at the end of a sprint c) The independent test team can be part of another team d) There can be a risk of losing test independence for organizations introducing agile
<p>18.</p>	<p>In an agile project, which of the following would best denote product quality at the end of iteration 6 of a new system release consisting of 8 iterations?</p> <ul style="list-style-type: none"> a) All story cards in scope for each iteration, up to the current iteration, have been marked as “Done”, but with some technical debt being incurred b) No severity 1 or 2 defects were detected during system testing of iteration 6, which allowed the teams to move into iteration 7 c) The results of a customer beta test on the iteration 6 software release indicate that the system works correctly and that it has improved productivity d) The agile team has been successfully tracking to estimates, with limited variance showing on the burndown charts for all iterations to date
<p>19.</p>	<p>Which of the following is best at showing the team’s progress against estimates?</p> <ul style="list-style-type: none"> a) The agile task board showing user story and task progress b) Automation logs c) Defect tracking tools d) Burndown charts
<p>20.</p>	<p>The business advises during iteration 5 planning that they require changes to the system delivered in iteration 3.</p> <p>Of the following activities, which would need to be done first to minimize the introduction of regression risk when this feature is changed?</p> <ul style="list-style-type: none"> a) Automate all test cases from the previous iteration and add them to the automated regression test suite b) Review and update all manual and automated tests impacted by this change to meet the new acceptance criteria c) Write new manual and automated tests for the feature and add them to the regression test suite d) Increase the amount of test automation around the system to include more detailed test conditions

21.	<p>Which TWO of the following are reasons why automation is essential within agile projects?</p> <ul style="list-style-type: none">i. So that teams maintain or increase their velocityii. To prevent the test team from becoming bored with manual, repetitive tasksiii. To retest all test cases from previous iterationsiv. To eliminate regression in the product due to high code churnv. To ensure that code changes do not break the software build <p>a) i and iv b) iii and iv c) i and v d) ii and v</p>
22.	<p>In agile projects there is more need for testers to understand and develop test automation scripts than in traditional projects.</p> <p>Of the following, which are the TWO reasons why this is a necessary skill on agile projects?</p> <ul style="list-style-type: none">i. Requirements change daily and have to be regression tested. This rapid change requires automated tests because manual testing is too slow.ii. The tests should generate feedback on product quality as early as possible. So all acceptance tests should be executed in each iteration, ideally as modifications are made. In practice that can only be realized by automated tests.iii. Test-First and Continuous Integration Practice require that the regression test suite is executed whenever changed code is checked-in. In practice that can only be realized by automated tests.iv. Iterations or sprints are of fixed length. The team has to guarantee that all tests can be completely executed at the last day of each iteration/sprint. In practice, that can only be realized by automated tests.v. Agile projects rely on unit testing rather than on systems testing. Since unit tests cannot be executed manually, all tests have to be automated tests. <p>a) ii and iii b) i and iii c) ii and v d) iv and v</p>

23.	Which tasks are typically expected of a tester on an agile project? i. decide on user acceptance ii. design, create and execute appropriate tests iii. schedule defect reports for analysis iv. automate and maintain tests v. improve program logic by pair programming a) i and iii b) ii and iii c) ii and v d) ii and iv
24.	Which of the following is NOT a typical task performed by the tester within an agile team? a) To participate in code analyzing activities b) To mentor and coach other team members c) To automate tests and maintain them d) To produce and update burndown charts
25.	The term “burndown” refers to which of the following? a) A chart showing which team members are working the most, and are likely to be under stress b) A chart showing the progress of each user story, and when they are likely to be completed c) A chart showing defects that have been fixed, and when the remaining defects are likely to be fixed d) A chart showing the amount of work left to be done, versus the time allocated for the iteration
26.	Which of the following statements about Test Driven Development (TDD) is FALSE? a) The TDD cycle is continuously used until the software product is released b) TDD helps to document the code for future maintenance efforts c) TDD is a “test first” approach to develop reusable automated tests d) The result of TDD are test classes used by the developer to develop test cases

<p>27.</p>	<p>What does the term ‘Test Pyramid’ refer to and illustrate situations for?</p> <ul style="list-style-type: none"> a) The number of automated unit tests is higher than the number of automated tests for higher test levels b) The number of automated tests in place increases from sprint to sprint c) The backlog size, and thus the number of tests, decreases d) The team’s testing workload increases from sprint to sprint
<p>28.</p>	<p>Which of the following demonstrates effective use of the testing quadrants?</p> <ul style="list-style-type: none"> a) The tester can use the testing quadrants during risk analysis; with the lower level quadrants representing lower risk to customer b) The tester can use the types of tests described in the testing quadrants as a coverage metric, the more tests covered from each quadrant, the higher the test coverage c) The team should pick a number of tests expected from each quadrant, and the tester should design and execute those tests to ensure all levels and types of tests have been executed d) When communicating test ideas, the tester can refer to the matching test quadrant, so that the rest of the team will better understand the purpose of the test
<p>29.</p>	<p>Given the following user stories:</p> <p>“As a bank teller, I can easily navigate through the system menu and links, and find the information I am looking for”</p> <p>“For all users, the system must display all queries in less than 2 seconds, 90% of the time”</p> <p>The associated test cases:</p> <p>TC1: Login as bank teller. Enter customer ID. Verify that the customer transaction history is easy to find, and that navigating through the menus is intuitive.</p> <p>TC2: Login as bank teller: Enter customer Name. Verify that the customer accounts are easy to find and that navigating through the menus is intuitive.</p> <p>TC3: Simulate expected traffic on system and validate the time for customer transaction history to display is less than 2 seconds.</p> <p>Which TWO test quadrants would the above test cases be part of?</p> <ul style="list-style-type: none"> a) Q3 system or user acceptance level, business facing & Q4 system or operation acceptance level, technology facing b) Q1 unit level, technology facing & Q2 system level, business facing c) Q2 system level, business facing & Q3 system or user acceptance level, business facing d) Q1 system level, business facing & Q4 system or operation acceptance level, technology facing

30.	<p>At the beginning of the 5th iteration of a project, a new requirement was introduced to support a new type of browser.</p> <p>The tester realizes that the existing test automation framework and scripts will not support the new type of browser. What is the best course of action for the tester on this team to take?</p> <ol style="list-style-type: none">The tester does some research and concludes that the risk is low that any new defects would be introduced in the new type of browser that have not already been found in other supported browsers. The tester continues with the existing sprint plan and makes no changes to test automation framework or scriptsThe tester should notify the team that they are planning on working extra hours throughout the next 2 sprints in order to update the existing test automation framework and scripts to support the new type of browser so as not to disturb the existing sprint planThe tester will notify the team of the issue. A risk analysis is done, and the team decides that regression testing must be performed on the new type of browser in addition to the other supported browsers. The tester will update the sprint plan by adding tasks to modify the framework and scripts to support the new type of browserThe tester will stop what they are doing, design specific tests for compatibility testing of the new type of browser, and communicate with the team that any other testing work for the sprint will have to be pushed to the next iteration
31.	<p>Given the following results from a product risk analysis that occurred at the beginning of an iteration:</p> <ul style="list-style-type: none">User story 1 (Performance): likelihood: high, impact: highUser story 2 (Security): likelihood: high, impact: highUser story 3 (Functional): likelihood: medium, impact: highUser story 4 (Functional): likelihood: high, impact: mediumUser story 5 (Compatibility): likelihood: low, impact: lowUser story 6 (Recoverability): likelihood: low, impact: low <p>Which one of the following describes best what the team should do with this information?</p> <ol style="list-style-type: none">The team should plan to complete all items in the current sprint, but save the lower risk items for the end of the sprint, and only test these items if there is timeBecause of the number of high likelihood, high impact risks slotted for this iteration, the team has no choice but to extend the timeframe of the iteration by 2 weeksMove onto planning poker session to estimate effort for user stories, and determine what can be done in the current iteration, and what needs to be added to backlogRemove user stories 5 and 6 from the current iteration and move to a later iteration

32.	<p>Given the following user story: “As the president, any data I upload should not be viewable by any other user of the system”</p> <p>During the first poker planning session, the following story points were given based on risk, effort, complexity, and proper extent of testing:</p> <p>Customers: 5 Developers: 5 Testers: 20</p> <p>What is the best outcome following this planning session?</p> <ul style="list-style-type: none">a) The poker planning sessions should continue until all estimated story points are an exact match between customers, developers, and testersb) Because the customer owns the system in the end, the customers’ estimates should be taken as correct when there is a conflictc) The team should hold a conversation to understand why the testers felt this user story was significantly more work. Another round of the planning poker session should occur following that discussiond) Because the customer’s and developer’s size estimates match, the team can be confident that this estimate is good and should move onto the next user story
33.	<p>An agile team is assigned to a project to update an existing medical device to newer technologies.</p> <p>Since the last release of the existing medical device, a new version of the medical device standard has been released. User access to the device is changing and will be documented in user stories.</p> <p>Based on this information, and in addition to the user stories, which of the following would best provide relevant information to support your testing activities?</p> <ul style="list-style-type: none">i. Updated version of standards document for medical systemii. Existing defects or typical defect areas in existing systemiii. Obsolete user access test cases and results for existing applicationiv. Performance metrics for existing applicationv. Defects logged during other similar conversion projects for medical devices <ul style="list-style-type: none">a) i, ii, iii, ivb) i, ii, vc) ii, iv, vd) All of the above

34.	Which alternative is the BEST description of when to stop testing (release criteria) in an agile project? a) The achieved test coverage is considered enough. The coverage limit is justified by the complexity of the included functionality, its implementation, and the risks involved b) The iteration/sprint is finished c) All test cases have been executed d) The probability of remaining faults has been reduced to a level that can be accepted by the customer
35.	Which one of the following is example of testable acceptance criteria for test related activities? a) Compatibility testing: The application is working on all major browsers b) Performance testing: The application is responding in a reasonable amount of time with 5000 users c) System testing: At least 80% of functional regression tests are automated d) Structure based testing: White box testing in addition to black box testing is used
36.	Given the following User Story: “As a bank teller, I would like to be able to view all of my customer’s bank transactions on the screen, so I can answer his/her questions”. Which of the following can be considered as relevant acceptance test cases? i. Login as a bank teller, get the customer’s account balance for all open accounts ii. Login as a bank teller, enter a customer account ID, get his transactions history on the screen iii. Login as a bank teller, request customer account ID by using name abbreviations, and get his transaction history on the screen iv. Login as a bank teller, enter a customer IBAN (international bank account number), get his transaction history on the screen v. Login as a Bank Teller, enter a customer Account ID, get the Transactions history in less than 3 seconds on screen a) i, iii, iv b) i, ii, iv c) ii, iv, v d) ii, iii, iv

37.	<p>Given the following user story: “An online application charges customers to ship purchased items, based on the following criteria:</p> <ul style="list-style-type: none">• Standard shipping costs for under 6 items• Shipping is \$5 for 6-10 items.• Shipping is free for more than 10 items. <p>Which of the following is the best black box test design technique for the user story?</p> <p>a) Boundary Value Analysis: Test the following inputs – 0,5,6,10,11,max</p> <p>b) State Transition testing: Test the following states – browsing, logged in, selecting, purchasing, confirming, and exiting.</p> <p>c) Decision tables: Test the following conditions – User logged in; At least 1 item in cart; Purchase confirmed; Funding approved; with the resulting action of – Ship Item.</p> <p>d) Use Case Testing: Actor=customer; Prerequisites=customer logs in, selects and purchases items; Postconditions= items are shipped.</p>
------------	---

<p>38. Your manager would like to introduce exploratory testing to your agile team. He has received the following suggestions on how to proceed from previous colleagues:</p> <ul style="list-style-type: none">i. User stories are assigned to testers who are completely new to the user story. There is allotted 120 minutes allocated to complete exploratory testing on the user story. Testers do not need to document tests, or test results, but do need to log defects if any are encountered.ii. User stories are assigned to testers who have already completed risk based testing on the same areas. There is allotted 120 minutes allocated to complete exploratory testing for this user story. The team expects at the end of the 120 minutes to have a list of test ideas, including data and actors, results and issues encountered, and list of defects to be logged in the defect management tool.iii. A user story is assigned to business representative. The business representative is told to use the system like the customer would on a day-to-day basis. If issues are encountered, the business representative is told to inform the tester, so that they can prioritize and log the defect.iv. A user story is assigned to a tester for exploratory testing. Tester is told to learn the functionality of the user story, to make sure the functionality is correct and to include negative testing. There is no set deadline for this exploratory testing to be complete; it depends on what is found by the tester. Documentation is not necessary, but defects need to be logged in defect tracking tool. <p>Your manager presents you with his conclusions about how best to introduce exploratory testing to an agile team. Which one of your manager's conclusions is correct?</p> <ul style="list-style-type: none">a) Scenario iii IS the best way because: Exploratory testing is preferably used for user acceptance testing, but not for other test levelsb) Scenario ii IS the best way because: In this case, the testers have knowledge of the user story already, which will help them come up with test conditions and ideas. The team is using time-boxed exploratory test sessions. The team is expected to document test conditions, data, and user information, and to log results of the test. Issues are logged in a defect tracking tool just like any other test technique.c) Scenario i IS the best way because: In exploratory testing, test design and test execution happen at the same time and is preferably performed by a tester that has no prior experience from the user story since they otherwise tend to be influenced by already acquired knowledge.d) Scenario iv IS the best way because: Documentation is not necessary for exploratory testing, and testers do not have to log test ideas and results of testing – except defects - since they may affect the independence of future testers

39.	Which of the following is one of the purposes of an Application Lifecycle Management (ALM) tool on an agile project? a) An ALM tool allows teams to build up a knowledge base on tools and techniques for development and testing activities b) An ALM tool provides visibility into the current state of the application, especially with distributed teams c) An ALM tool generates and loads large volumes and combinations of data to use for testing d) An ALM tool provides quick response about the build quality and details about code changes
40.	Which of the following statements is FALSE with respect to exploratory testing? a) Best results are achieved when exploratory testing is combined with other test strategies b) Exploratory testers need to have a solid understanding of the system under test c) Exploratory testing eliminates the need for testers to prepare test ideas prior to test execution d) Exploratory testing encompasses concurrent learning, test design, and execution

Please return this questionnaire and all your notes together with your answer sheet at the end of the examination.

Practice Exam