



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

Foundation Level Exam in Software Testing

Version 4.0

**Examination Questions
2023-08-18**

**Time allowed: 1:00
(For non-native English speakers: 1:15)**

There are 40 questions.

Correct answer 1 point, wrong answer 0 point

Total 40 points; You need 26 points to pass (65%)

You must follow directives given to you by the proctor during the whole exam.

**Mark your answers in the provided answer sheet. Try to answer all questions.
Select one option per question if nothing else indicated. 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.**

1.	<p>In your project there has been a delay in the release of a brand-new application and test execution started late.</p> <p>You have very detailed domain knowledge and good analytical skills. The full list of requirements has not yet been shared with the team, but management is asking for some test results to be presented.</p> <p>Which test technique fits BEST in this situation?</p> <ul style="list-style-type: none">a) Branch testingb) Checklist-based testingc) Exploratory testingd) Error guessing <p>Please select exactly 1 option</p>
2.	<p>You are testing a simplified apartment search form which has only two search criteria:</p> <ul style="list-style-type: none">• floor (with three possible options: ground floor; first floor; second or higher floor)• garden type (with three possible options: no garden; small garden; large garden) <p>Only apartments on the ground floor may have gardens. The form has a built-in validation mechanism that will not allow you to use the search criteria which violate this rule.</p> <p>Each test has two input values: floor and garden type. You want to apply equivalence partitioning (EP) to cover each floor and each garden type in your tests.</p> <p>What is the minimal number of test cases to achieve 100% EP coverage?</p> <ul style="list-style-type: none">a) 6b) 5c) 4d) 3 <p>Please select exactly 1 option</p>

3.	<p>You have been assigned as a tester to a team producing a new system incrementally.</p> <p>You have noticed that no changes have been made to the existing regression test cases for several iterations and no new regression defects were identified. Your manager is happy, but you are not. Which testing principle explains your scepticism?</p> <ul style="list-style-type: none"> a) Exhaustive testing is impossible b) Absence-of-errors fallacy c) Tests wear out d) Defects cluster together <p>Please select exactly 1 option</p>
4.	<p>Consider the following test categories (1-4) and agile testing quadrants (A-D):</p> <ul style="list-style-type: none"> 1. Usability testing 2. Component testing 3. Functional testing 4. Reliability testing <ul style="list-style-type: none"> A. Agile testing quadrant Q1: technology facing, supporting the development team B. Agile testing quadrant Q2: business facing, supporting the development team C. Agile testing quadrant Q3: business facing, critique the product D. Agile testing quadrant Q4: technology facing, critique the product <p>How do the following test categories map onto the agile testing quadrants?</p> <ul style="list-style-type: none"> a) 1D, 2B, 3C, 4A b) 1C, 2A, 3B, 4D c) 1D, 2A, 3C, 4B d) 1C, 2B, 3D, 4A <p>Please select exactly 1 option</p>
5.	<p>How is the whole team approach present in the interactions between testers and business representatives?</p> <ul style="list-style-type: none"> a) Testers help business representatives to create suitable acceptance tests b) Business representatives are not part of the whole team approach c) Business representatives decide on test automation approaches d) Testers help business representatives to define test strategy <p>Please select exactly 1 option</p>

<p>6.</p>	<p>During a risk analysis the following risk was identified and assessed:</p> <ul style="list-style-type: none"> • Risk: Response time is too long to generate a report • Risk likelihood: medium; risk impact: high • Response to risk: <ul style="list-style-type: none"> ○ an independent test team performs performance testing during system testing ○ a selected sample of end users performs alpha and beta acceptance testing before the release <p>What measure is proposed to be taken in response to this analyzed risk?</p> <p>a) Risk acceptance b) Risk transfer c) Risk mitigation d) Contingency plan</p> <p>Please select exactly 1 option</p>
<p>7.</p>	<p>Which of the following factors (i-v) have SIGNIFICANT influence on the test process?</p> <p>i. The SDLC ii. The number of defects detected in previous projects iii. The identified product risks iv. New regulatory requirements forcing v. The number of certified testers in the organization</p> <p>a) iii, v have significant influence; i, ii, iv have not b) ii, iv, v have significant influence; i, iii have not c) i, ii have significant influence; iii, iv, v have not d) i, iii, iv have significant influence; ii, v have not</p> <p>Please select exactly 1 option</p>
<p>8.</p>	<p>Which of the following is the BEST example of how traceability supports testing?</p> <p>a) Analyzing the traceability between test cases and test results will give information about the estimated level of residual risk b) Performing the impact analysis of a change will give information about the completion of the tests c) Performing the impact analysis of a change will help selecting the right test cases for regression testing d) Analyzing the traceability between the test basis, the test objects and the test cases will help in selecting test data to achieve the assumed coverage of the test object</p> <p>Please select exactly 1 option</p>

9.	<p>Your team uses the three-point estimation technique to estimate the test effort for a new high-risk feature.</p> <p>The following estimates were made:</p> <ul style="list-style-type: none"> • most optimistic estimation: 2 person-hours • most likely estimation: 11 person-hours • most pessimistic estimation: 14 person-hours <p>What is the final estimate?</p> <p>a) 14 person-hours b) 9 person-hours c) 10 person-hours d) 11 person-hours</p> <p>Please select exactly 1 option</p>
10.	<p>A phone ringing in a neighboring cubicle distracts a programmer causing him to improperly program the logic that checks the upper boundary of an input variable.</p> <p>Later, during system testing, a tester notices that this input field accepts invalid input values.</p> <p>Which of the following correctly describes an incorrectly coded upper bound?</p> <p>a) A defect b) An error c) A failure d) The root cause</p> <p>Please select exactly 1 option</p>
11.	<p>Which of the following BEST explains a benefit of independence of testing?</p> <p>a) The use of an independent test team allows project management to assign responsibility for the quality of the final deliverable to the test team</p> <p>b) When specifications contain ambiguities and inconsistencies, assumptions are made on their interpretation, and an independent tester can be useful in questioning those assumptions and the interpretation made by the developer</p> <p>c) If a test team external to the organization can be afforded, then there are distinct benefits in terms of this external team not being so easily swayed by the delivery concerns of project management and the need to meet strict delivery deadlines</p> <p>d) An independent test team can work separately from the developers, need not be distracted with project requirement changes, and can restrict communication with the developers to defect reporting through the defect management system</p> <p>Please select exactly 1 option</p>

12.	<p>You work as a tester on a project with a mobile application for food ordering for one of your clients.</p> <p>The client sent you a list of requirements. One of them, with high priority, says: <i>"The order must be processed in less than 10 seconds in 95% of the cases".</i></p> <p>You created a set of test cases in which several random orders were made, the processing time measured, and the test results were checked against the requirements. What test type did you perform?</p> <ul style="list-style-type: none">a) Functional, because the test cases cover the user's business requirement for the systemb) Functional, because the test cases interact with the user interfacec) Non-functional, because it measures the system's performanced) Structural, because we need to know the internal structure of the program to measure the order processing time <p>Please select exactly 1 option</p>
13.	<p>Which tool can be used by an agile team to show the amount of work that has been completed and the amount of total work remaining for a given iteration?</p> <ul style="list-style-type: none">a) Test completion reportb) Acceptance criteriac) Defect reportd) Burndown chart <p>Please select exactly 1 option</p>

14.	<p>You received the following defect report from the developers stating that the anomaly described is not reproducible.</p> <p><i>Application hangs up</i></p> <p><i>2022-May-03 – John Doe – Rejected</i></p> <p><i>The application hangs up after entering “Test input: \$ä” in the Name field on the new user creation screen. Tried to log off, log in with test_admin01 account, same issue. Tried with other test admin accounts, same issue. No error message received; log (see attached) contains fatal error notification. Based on the test case TC-1305, the application should accept the provided input and create the user. Please fix with high priority, this feature is related to REQ-0012, which is a critical new business requirement.</i></p> <p>What critical information is MISSING from this test report that would have been useful for the developers?</p> <ul style="list-style-type: none"> a) References and defect status b) Test environment and test item c) Expected result and actual result d) Priority and severity <p>Please select exactly 1 option</p>
15.	<p>Which of the following statements BEST describes the acceptance test-driven development (ATDD) approach?</p> <ul style="list-style-type: none"> a) in ATDD, tests are based on the desired behavior of the software, which makes it easier for team members to understand them b) In ATDD, tests are created, based on acceptance criteria to drive the development of the related software c) In ATDD, acceptance criteria are typically created based on the given/when/then format d) In ATDD, test cases are mainly created at component testing and are code-oriented <p>Please select exactly 1 option</p>

16.	<p>Which of the following BEST describes the way acceptance criteria can be documented?</p> <ul style="list-style-type: none">a) Using verbal communication to reduce the risk of misunderstanding the acceptance criteria by othersb) Performing retrospectives to determine the actual needs of the stakeholders regarding a given user storyc) Using the given/when/then format to describe an example test condition related to a given user storyd) Documenting risks related to a given user story in a test plan to facilitate the risk-based testing of a given user story <p>Please select exactly 1 option</p>
17.	<p>Which of the following is a characteristic of experience-based test techniques?</p> <ul style="list-style-type: none">a) The test cases are used to identify deviations from the requirementsb) The techniques heavily rely on the tester's knowledge of the software and the business domainc) Items tested within the interface code section are used to measure coveraged) Test cases are created based on detailed design information <p>Please select exactly 1 option</p>
18.	<p>Consider the following rule: "for every SDLC activity there is a corresponding test activity". In which SDLC models does this rule hold?</p> <ul style="list-style-type: none">a) Only in sequential development modelb) Only in iterative and incremental development modelc) In sequential, incremental, and iterative development modeld) Only in iterative development model <p>Please select exactly 1 option</p>

19. You are testing a user story with three acceptance criteria: AC1, AC2 and AC3.

AC1 is covered by test case TC1, AC2 by TC2, and AC3 by TC3. The test execution history has three test runs on three consecutive versions of the software as follows:

	Execution 1	Execution 2	Execution 3
TC1	(1) Failed	(4) Passed	(7) Passed
TC2	(2) Passed	(5) Failed	(8) Passed
TC3	(3) Failed	(6) Failed	(9) Passed

Tests are repeated once you are informed that all defects found in the test run are corrected and a new version of the software is available.

Which of the above tests are executed as regression tests?

a) Only 5, 6

b) Only 5, 7

c) Only 4, 6, 8, 9

d) Only 4, 7, 8, 9

Please select exactly 1 option

20. Which of the following statements about formal reviews is TRUE?

a) Documentation to be reviewed is not distributed before the review meeting, except for the work product for specific review types

b) Some reviews do not require more than one role

c) Defects found during the review are not reported since they are not found by dynamic testing

d) The review process has several activities

Please select exactly 1 option

21. Which item correctly identifies a potential risk of performing test automation?

a) It may introduce unknown regressions in production

b) It may reduce the time allocated for manual testing

c) Testing tools and associated testware may not be sufficiently relied upon

d) Sufficient efforts to maintain testware may not be properly allocated

Please select exactly 1 option

22.	<p>Which test activity does a data preparation tool support?</p> <ul style="list-style-type: none"> a) Test monitoring and control b) Test completion c) Test analysis d) Test implementation <p>Please select exactly 1 option</p>
23.	<p>Which of these statements is NOT a factor that contributes to successful reviews?</p> <ul style="list-style-type: none"> a) Participants should avoid behaviors that might indicate boredom, exasperation, or hostility to other participants b) Failures found should be acknowledged, appreciated, and handled objectively c) Participants should dedicate adequate time for the review d) Splitting large work products into small parts to make the required effort less intense <p>Please select exactly 1 option</p>
24.	<p>Which of the following is NOT an example of the shift-left approach?</p> <ul style="list-style-type: none"> a) Writing a component test before the corresponding code is written b) Reviewing the user requirements before they are formally accepted by the stakeholders c) Executing a performance efficiency test for a component during component testing d) Writing a test script before setting up the configuration management process <p>Please select exactly 1 option</p>
25.	<p>Consider the following part of a test plan. <i>Testing will be performed using component testing and component integration testing. The regulations require to demonstrate that 100% branch coverage is achieved for each component classified as critical.</i></p> <p>Which part of the test plan does this part belong to?</p> <ul style="list-style-type: none"> a) Test approach b) Risk register c) Communication d) Context of testing <p>Please select exactly 1 option</p>

26.	<p>You need to update one of the automated test scripts to be in line with a new requirement.</p> <p>Which process indicates that you create a new version of the test script in the test repository?</p> <ul style="list-style-type: none">a) Traceability managementb) Requirements engineeringc) Configuration managementd) Maintenance testing <p>Please select exactly 1 option</p>
27.	<p>The following is a list of the work products produced in the SDLC.</p> <ul style="list-style-type: none">i. Business requirementsii. Scheduleiii. Test budgetiv. Third-party executable codev. User stories and their acceptance criteria <p>Which of them can be reviewed?</p> <ul style="list-style-type: none">a) i and iv can be reviewed; ii, iii and v cannotb) i, ii, iii, and v can be reviewed; iv cannotc) iii, iv, v can be reviewed; i and ii cannotd) i, ii, iii and iv can be reviewed; v cannot <p>Please select exactly 1 option</p>

28. Your favourite bicycle daily rental store has just introduced a new Customer Relationship Management system and asked you, one of their most loyal members, to test it.

The implemented features are as follows:

- Anyone can rent a bicycle, but members receive a 20% discount
- However, if the return deadline is missed, the discount is no longer available
- After 15 rentals, members get a gift: a T-Shirt

Decision table describing the implemented features looks as follows:

Conditions	R1	R2	R3	R4	R5	R6	R7	R8
Being a member	T	T	T	T	F	F	F	F
Missed deadline	T	F	T	F	T	F	F	T
15th rental	F	F	T	T	F	F	T	T
Actions								
20% discount		X		X				
Gift T-Shirt			X	X				X

Based ONLY on the feature description of the Customer Relationship Management system, which of the above rules describes an impossible situation?

- R8
- R4
- R6
- R2

Please select exactly 1 option

29. Which TWO of the following tasks belong MAINLY to a testing role?

- Maintain the product backlog
- Configure test environments
- Design solutions to new requirements
- Report on achieved coverage
- Create the test plan

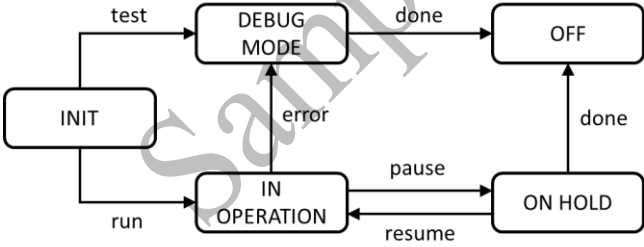
Please select exactly 2 options

30. Which of the following is NOT true for white-box testing?

- During white-box testing the entire software implementation is considered
- White-box testing can help identify gaps in requirements implementation
- White-box coverage metrics can help identify additional tests to increase code coverage
- White-box test techniques can be used in static testing

Please select exactly 1 option

31.	<p>You are testing a system that calculates the final course grade for a given student.</p> <p>The final grade is assigned based on the result, according to the following rules:</p> <ul style="list-style-type: none">• 0 – 50 points: failed• 51 – 60 points: fair• 61 – 70 points: satisfactory• 71 – 80 points: good• 81 – 90 points: very good• 91 – 100 points: excellent <p>You have prepared the following set of test cases:</p> <table><tr><th></th><th>Result</th><th>Final grade</th></tr><tr><td>TC1</td><td>91</td><td>excellent</td></tr><tr><td>TC2</td><td>50</td><td>failed</td></tr><tr><td>TC3</td><td>81</td><td>very good</td></tr><tr><td>TC4</td><td>60</td><td>fair</td></tr><tr><td>TC5</td><td>70</td><td>satisfactory</td></tr><tr><td>TC6</td><td>80</td><td>good</td></tr></table> <p>What is the 2-value Boundary Value Analysis (BVA) coverage for the result that is achieved with the existing test cases?</p> <p>a) 50% b) 100% c) 33,3% d) 60%</p> <p>Please select exactly 1 option</p>		Result	Final grade	TC1	91	excellent	TC2	50	failed	TC3	81	very good	TC4	60	fair	TC5	70	satisfactory	TC6	80	good
	Result	Final grade																				
TC1	91	excellent																				
TC2	50	failed																				
TC3	81	very good																				
TC4	60	fair																				
TC5	70	satisfactory																				
TC6	80	good																				
32.	<p>Which of the following statements (i-v) are true for dynamic testing and which are true for static testing?</p> <p>i. Abnormal external behaviors are easier to identify with this testing ii. Discrepancies from a coding standard are easier to find with this testing iii. It identifies failures caused by defects when the software is run iv. Its test objective is to identify defects as early as possible v. Missing coverage for critical security requirements is easier to find and fix</p> <p>a) ii, iv, v are true for static testing; i, iii, iv are true for dynamic testing b) ii, iii are true for static testing; i, iv, v are true for dynamic testing c) i, iv, v are true for static testing; ii, iii are true for dynamic testing d) i, iii, iv are true for static testing; ii, v are true for dynamic testing</p> <p>Please select exactly 1 option</p>																					

33.	<p>You are working as a tester in the team that follows the V-model. How does the choice of this software development lifecycle (SDLC) model impact the timing of testing?</p> <p>a) Test planning cannot be performed early in the SDLC b) Static testing cannot be performed early in the SDLC c) Dynamic testing cannot be performed early in the SDLC d) Acceptance testing can be performed early in the SDLC</p> <p>Please select exactly 1 option</p>
34.	<p>You are testing a mobile application 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 maximizes attractiveness, ease-of-use, and accessibility for such applications. Which of the following options BEST categorizes the test technique you are using?</p> <p>a) Exploratory b) Black-box c) Error guessing d) Checklist-based</p> <p>Please select exactly 1 option</p>
35.	<p>You test a system whose lifecycle is modeled by the state transition diagram shown below. The system starts in the INIT state and ends its operation in the OFF state.</p>  <pre> graph LR INIT[INIT] -- test --> DEBUG[DEBUG MODE] INIT -- run --> INOP[IN OPERATION] DEBUG -- done --> OFF[OFF] INOP -- done --> OFF INOP -- pause --> ONHOLD[ON HOLD] ONHOLD -- resume --> INOP ONHOLD -- done --> OFF </pre> <p>What is the MINIMAL number of test cases to achieve valid transitions coverage?</p> <p>a) 3 b) 2 c) 7 d) 4</p> <p>Please select exactly 1 option</p>

36.	<p>How do testers add value to iteration and release planning?</p> <ul style="list-style-type: none"> a) Testers focus only on the functional aspects of the system to be tested b) Testers determine the priority of the user stories to be developed c) Testers participate in the detailed risk identification and risk assessment of user stories d) Testers guarantee the release of high-quality software through early test design during the release planning <p>Please select exactly 1 option</p>
37.	<p>Consider the following user story: <i>As an Editor</i> <i>I want to review content before it is published</i> <i>so that I can assure the grammar is correct</i></p> <p>and its acceptance criteria:</p> <ul style="list-style-type: none"> • The user can log in to the content management system with "Editor" role • The editor can view existing content pages • The editor can edit the page content • The editor can add markup comments • The editor can save changes • The editor can reassign to the "content owner" role to make updates <p>Which of the following is the BEST example of an ATDD test for this user story?</p> <ul style="list-style-type: none"> a) Test if the content owner can log in and make updates to the content b) Test if the editor can schedule the edited content for publication c) Test if the editor can save the document after deleting the page content d) Test if the editor can reassign to another editor to make updates <p>Please select exactly 1 option</p>

38. You are testing a mobile application 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 (i.e., a smaller number means a higher priority), and dependencies:

Test case number	Test condition covered	Priority	Logical dependency
TC 001	Select type of food	3	none
TC 002	Select restaurant	2	TC 001
TC 003	Get direction	1	TC 002
TC 004	Call restaurant	2	TC 002
TC 005	Make reservation	3	TC 002

Which of the following test cases should be executed as the third one?

- a) TC 002
- b) TC 001
- c) TC 003
- d) TC 005

Please select exactly 1 option

39. Your test suite achieves 100% statement coverage.

What is the consequence of this fact?

- a) Each of the decision statements in the code has been evaluated at least once
- b) Every combination of input values must be tested
- c) Each path in the code must be executed at least once
- d) Any test suite containing more test cases than your test suite will also achieve 100% statement coverage

Please select exactly 1 option

40. In many software organizations the test department is called the Quality Assurance (QA) department.

Is this sentence correct or not and why?

- a) It is not correct. Testing is something more; testing includes all activities regarding quality. QA focuses on quality-related processes
- b) It is correct. These names can be used interchangeably because both testing and QA focus their activities on the same quality issues
- c) It is correct. Testing and QA mean the same thing
- d) It is not correct. QA is focused on quality-related processes while testing concentrates on demonstrating that a component or system is fit for purpose and to detect defects

Please select exactly 1 option

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

Sample Exam A1