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.	**Which of the following BEST describes the concept behind error guessing?**
	a) Error guessing involves using your personal experience of development and the errors you made as a developer
	b) Error guessing involves using your knowledge and experience of defects found in the past and typical errors made by developers
	c) Error guessing requires you to rapidly duplicate the development task to identify the sort of errors a developer might make
	d) Error guessing requires you to imagine that you are the user of the test object and to guess errors the user could make interacting with it
	Please select exactly 1 option
2.	**Which TWO of the following options are the exit criteria for testing a system?**
	a) Estimated defect density is reached
	b) The ability to log in to the test object by the tester
	c) Requirements are translated into given/when/then format
	d) Regression tests are automated
	e) Test environment readiness
	Please select exactly 2 options
3.	**Which of the following statements about branch testing is CORRECT?**
	a) If a program includes only unconditional branches, then 100% branch coverage can be achieved without executing any test cases
	b) If 100% branch coverage is achieved, then all decision outcomes in each decision statement in the code are exercised
	c) If 100% statement coverage is achieved, then 100% branch coverage is also achieved
	d) If the test cases exercise all unconditional branches in the code, then 100% branch coverage is achieved
	Please select exactly 1 option

4.	**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?

a) R6
b) R2
c) R8
d) R4

Please select exactly 1 option

5.	**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 005
b) TC 001
c) TC 003
d) TC 002

Please select exactly 1 option

6.	**What task may management take on during a formal review?**

a) Taking overall responsibility for the review
b) Deciding what is to be reviewed
c) Ensuring the effective running of review meetings, and mediating, if necessary
d) Recording review information such as review decisions

Please select exactly 1 option

7.	**In your project there has been a delay in the release of a brand-new application and test execution started late.**

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.

Which test technique fits **BEST** in this situation?

a) Exploratory testing
b) Error guessing
c) Branch testing
d) Checklist-based testing

Please select exactly 1 option

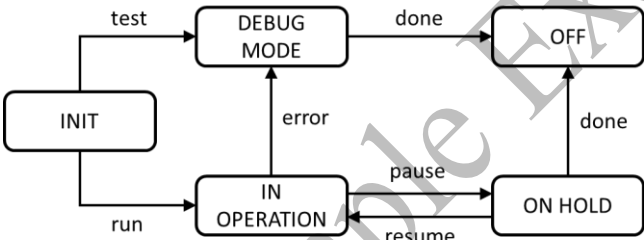| 8.	**Which of the following is a characteristic of experience-based test techniques?** a) Items tested within the interface code section are used to measure coverage b) The techniques heavily rely on the tester's knowledge of the software and the business domain c) Test cases are created based on detailed design information d) The test cases are used to identify deviations from the requirements Please select exactly 1 option
9.	**You received the following defect report from the developers stating that the anomaly described is not reproducible.** *Application hangs up* *2022-May-03 – John Doe – Rejected* *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.* What critical information is MISSING from this test report that would have been useful for the developers? a) Test environment and test item b) References and defect status c) Expected result and actual result d) Priority and severity Please select exactly 1 option
10.	**Which item correctly identifies a potential risk of performing test automation?** a) Testing tools and associated testware may not be sufficiently relied upon b) Sufficient efforts to maintain testware may not be properly allocated c) It may reduce the time allocated for manual testing d) It may introduce unknown regressions in production Please select exactly 1 option

11.	**Which of the following is NOT true regarding the test pyramid?**
	a) For system testing and acceptance testing, the automated tests are typically created using GUI-based tools
	b) The closer to the top of the pyramid, the more formal your test automation should be
	c) The test pyramid emphasizes having a larger number of tests at the lower test levels
	d) Usually, component testing and component integration testing are automated using API-based tools
	Please select exactly 1 option
12.	**Which types of failures (1-4) fit which test levels (A-D) BEST?**
	1. Failures in system behavior as it deviates from the user's business needs
	2. Failures in communication between components
	3. Failures in logic in a module
	4. Failures in implemented business rules
	A. Component testing
	B. Component integration testing
	C. System testing
	D. Acceptance testing
	a) 1C, 2B, 3A, 4D
	b) 1D, 2B, 3A, 4C
	c) 1D, 2B, 3C, 4A
	d) 1B, 2A, 3D, 4C
	Please select exactly 1 option
13.	**You need to update one of the automated test scripts to be in line with a new requirement.**
	Which process indicates that you create a new version of the test script in the test repository?
	a) Traceability management
	b) Configuration management
	c) Requirements engineering
	d) Maintenance testing
	Please select exactly 1 option

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14.	**Which of the following is a benefit of early and frequent feedback?**
	a) It is the only way to measure the quality of changes b) It improves the test process for future projects c) It forces customers to prioritize their requirements based on agreed risks d) It helps avoid requirements misunderstandings Please select exactly 1 option
15.	**You have been assigned as a tester to a team producing a new system incrementally.** 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? a) Tests wear out b) Absence-of-errors fallacy c) Exhaustive testing is impossible d) Defects cluster together Please select exactly 1 option
16.	**Consider the following testware.**

Test Charter #04.018	Session time: 1h
Explore:	Registration page
With:	Different sets of incorrect input data
To discover:	Defects related to accepting the registration process with the incorrect input

Which test activity produces this testware as an output?

a) Test planning
b) Test design
c) Test analysis
d) Test monitoring and control

Please select exactly 1 option

17.	**Which TWO of the following tasks belong MAINLY to a testing role?** a) Maintain the product backlog b) Report on achieved coverage c) Configure test environments d) Design solutions to new requirements e) Create the test plan Please select exactly 2 options
18.	**Which TWO of the following are advantages of DevOps?** a) Reduction in the number of regression tests associated with code refactoring b) Setting up the test automation framework is inexpensive since everything is automated c) Increases the need for repetitive manual testing d) Constant availability of executable software e) Faster product release and faster time to market Please select exactly 2 options
19.	**You work in a team that develops a mobile application for food ordering.** In the current iteration the team shall now implement the payment functionality. Which of the following activities is a part of test analysis? a) Using boundary value analysis (BVA) to derive the test data for the test cases that check the correct payment processing for the minimum allowed amount to be paid b) Decide that the team should test the possibility to properly share payment between many users c) Estimating that testing the integration with the payment service will take 8 person-days d) Analyzing the discrepancy between the actual result and expected result after executing a test case that checks the process of payment with a credit card, and reporting a defect Please select exactly 1 option

20.	**Risks have been identified for a new software product to be developed.** Which **TWO** of them are project risks?

a) The system does not comply with functional safety standards
b) System response time exceeds user requirements
c) Management moves two experienced testers to another project
d) Disabled people have problems when using the system
e) Stakeholders have inaccurate expectations

Please select exactly 2 options

21.	**You are testing a simplified apartment search form which has only two search criteria:**

- 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)

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.

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.

What is the **minimal** number of test cases to achieve 100% EP coverage?

a) 3
b) 6
c) 5
d) 4

Please select exactly 1 option

22.	**Consider the following test categories (1-4) and agile testing quadrants (A-D):**
	1. Usability testing
	2. Component testing
	3. Functional testing
	4. Reliability testing
	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
	How do the following test categories map onto the agile testing quadrants?
	a) 1C, 2A, 3B, 4D
	b) 1D, 2A, 3C, 4B
	c) 1D, 2B, 3C, 4A
	d) 1C, 2B, 3D, 4A
	Please select exactly 1 option
23.	**You were given a task to analyze and fix causes of failures in a new system to be released.**
	Which activity are you performing?
	a) Defect management
	b) Debugging
	c) Requirement elicitation
	d) Software testing
	Please select exactly 1 option

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24.	**A wine storage system uses a control device that measures the wine cell temperature T (measured in °C, rounded to the nearest degree) and alarms the user if it deviates from the optimal value of 12 °C, according to the following rules:**
	• if T = 12, the system says, "optimal temperature"
	• if T < 12, the system says, "temperature is too low!"
	• if T > 12, the system says, "temperature is too high!"
	You want to use the 3-point boundary value analysis (BVA) to verify the behavior of the control device. A test input is a temperature in °C provided by the device. What is the **MINIMAL** set of test inputs that achieves 100% coverage?
	a) 11, 12, 13
	b) 10, 11, 12, 13, 14
	c) 10, 12, 14
	d) 10, 11, 13, 14
	Please select exactly 1 option
25.	**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.
	What is the MINIMAL number of test cases to achieve valid transitions coverage?
	a) 2
	b) 4
	c) 3
	d) 7
	Please select exactly 1 option

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26.	**Which of the following is NOT true for white-box testing?**
	a) White-box testing can help identify gaps in requirements implementation b) White-box test techniques can be used in static testing c) White-box coverage metrics can help identify additional tests to increase code coverage d) During white-box testing the entire software implementation is considered Please select exactly 1 option
27.	**How is the whole team approach present in the interactions between testers and business representatives?**
	a) Testers help business representatives to define test strategy b) Testers help business representatives to create suitable acceptance tests c) Business representatives are not part of the whole team approach d) Business representatives decide on test automation approaches Please select exactly 1 option
28.	**Which test activity does a data preparation tool support?**
	a) Test implementation b) Test analysis c) Test completion d) Test monitoring and control Please select exactly 1 option
29.	**Which of the following is NOT a benefit of static testing?**
	a) Fixing defects found during static testing is generally much less expensive than fixing defects found during dynamic testing b) Detecting gaps and inconsistencies in requirements c) Having less expensive defect management due to the ease of detecting defects later in the SDLC d) Finding coding defects that might not have been found by only performing dynamic testing Please select exactly 1 option

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30.	**Which of the following skills (i-v) are the MOST important skills of a tester?**
	i. Having domain knowledge ii. Creating a product vision iii. Being a good team player iv. Planning and organizing the work of the team v. Critical thinking a) i, ii and v are important; iii and iv are not b) ii and iv are important; i, iii and v are not c) i, iii and v are important; ii and iv are not d) iii and iv are important; i, ii and v are not Please select exactly 1 option
31.	**Which of the following statements BEST describes the acceptance test-driven development (ATDD) approach?** a) In ATDD, test cases are mainly created at component testing and are code-oriented b) In ATDD, acceptance criteria are typically created based on the given/when/then format c) In ATDD, tests are created, based on acceptance criteria to drive the development of the related software d) in ATDD, tests are based on the desired behavior of the software, which makes it easier for team members to understand them Please select exactly 1 option
32.	**Which of the following pieces of information contained in a test progress report is the LEAST useful for business representatives?** a) Branch coverage achieved b) Hindrance to testing c) New risks within the test cycle d) Test progress Please select exactly 1 option

33.	**Which of the following BEST describes the collaborative approach to user story writing?**
	a) User stories are created in a way that they are independent, negotiable, valuable, estimable, small, and testable
	b) User stories are created by business representatives, developers, and testers together
	c) User stories are created by testers and developers and then accepted by business representatives
	d) User stories are created by business representatives and verified by developers and testers
	Please select exactly 1 option
34.	**Consider the following user story:**
	As an Editor
	I want to review content before it is published
	so that I can assure the grammar is correct
	and its acceptance criteria:
	• 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
	Which of the following is the BEST example of an ATDD test for this user story?
	a) Test if the editor can schedule the edited content for publication
	b) Test if the content owner can log in and make updates to the content
	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
	Please select exactly 1 option

Sample Exam A2

35.	**Which of the arguments below would you use to convince your manager to organize retrospectives at the end of each release cycle?** a) Organizing retrospectives will save the organization money because end user representatives do not provide immediate feedback about the product b) Retrospectives embrace five values including courage and respect, which are crucial to maintain continuous improvement in the organization c) Process weaknesses identified during the retrospective can be analyzed and serve as a to do list for the organization's continuous process improvement program d) Retrospectives are very popular these days and clients would appreciate it if we added them to our processes Please select exactly 1 option
36.	**Consider the following rule: "for every SDLC activity there is a corresponding test activity".** In which SDLC models does this rule hold? a) Only in iterative development model b) Only in sequential development model c) In sequential, incremental, and iterative development model d) Only in iterative and incremental development model Please select exactly 1 option
37.	**Which of the following statements describe a valid test objective?** a) To reduce the risk level of the test object and to build confidence in the quality level b) To prove that there will be no failures after the implementation of the system into production c) To prove that there are no unfixed defects in the system under test d) To verify that there are no untested combinations of inputs Please select exactly 1 option
38.	**Your organization's test strategy suggests that once a system is going to be retired, data migration shall be tested.** What testing is **MOST** likely to be performed? a) Regression testing b) Maintenance testing c) Integration testing d) Component testing Please select exactly 1 option

39.	**Your team uses planning poker to estimate the test effort for a newly required feature.**

There is a rule in your team that if there is no time to reach full agreement and the variation in the results is small, applying rules like "accept the number with the most votes" can be applied.

After two rounds, the consensus was not reached, so the third round was initiated. You can see the test estimation results in the table below.

	Team members' estimations						
Round 1	21	2	5	34	13	8	2
Round 2	13	8	8	34	13	8	5
Round 3	13	8	13	13	13	13	8

Which of the following is the **BEST** example of the next step?

a) Accept 13 as the final test estimate as this has most of the votes
b) Remove the new feature from the current release because consensus has not been reached
c) The product owner must step in and make a final decision
d) No further action is needed. Consensus has been reached

Please select exactly 1 option

40.	**The reviews being used in your organization have the following attributes:**

- There is the role of a scribe
- The main purpose is to evaluate quality
- The meeting is led by the author of the work product
- There is individual preparation
- A review report is produced

Which of the following review types is **MOST** likely being used?

a) Informal review
b) Inspection
c) Walkthrough
d) Technical review

Please select exactly 1 option

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