CTFL V4.0 Practice Questions Chapter-2 Set-1

Question 1:

Which of the following best practices for achieving a "shift-left" approach are typically the responsibility of developers rather than testers?

i. Unit testing

ii. Component Integration testing

iii. System integration testing

iv. ATDD

v. Test system performance

a) i, ii
b) i, ii, v
c) i, ii, iii
d) i, ii, iv

Question 2:

Which of the following best exemplifies how retrospectives serve as a mechanism for process improvement?

a) The retrospective provides an opportunity for team members to voice concerns and depart on a positive note
b) Daily retrospectives where each team member shares accomplishments and identifies obstacles lead to continuous improvements in processes and people
c) Objective metrics and factual data presented during a retrospective prompt the team to consider areas for improvement
d) During the retrospective, a comprehensive review of all test cases is conducted to incorporate any necessary updates for the subsequent iterations

Question 3:

In which category of Software Development Life Cycle (SDLC) does the V-model exemplify?

a) Agile software development
b) Incremental development model
c) Iterative development model
d) Sequential development model

Question 4:

Given the following statements about the relationships between software development activities and test activities in the software development lifecycle:

1. Each development activity should have a corresponding testing activity

2. Reviewing should start as soon as final versions of documents become available

3. The design and implementation of tests should start during the corresponding development activity

4. Testing activities should start in the early stages of the software development lifecycle

Which of the following CORRECTLY shows which are true and false?

a) True – 1, 2; False – 3, 4
b) True – 2, 3; False – 1, 4
c) True – 1, 2, 4; False – 3
d) True – 1, 4; False – 2, 3

Question 5:

Which of the following statements about BDD is true?

a) BDD involves collaboration among developers, testers, and customers to define acceptance criteria before development begins
b) BDD tests belong to quadrant four (Q4) and help developers understand non-functional system characteristics like performance, security, portability, and maintainability
c) In BDD, acceptance criteria are typically created based on the given/when/then format and then automatically translated into executable tests
d) In BDD, tests are created based on acceptance criteria to drive the development of the related software

Question 6:

Which of the following represents the risks and challenges of DevOps?

a) Test automation requires additional resources and may be difficult to establish and maintain

b) All tests must be automated, so the time for test design and test execution increases

c) The risk of identification of the regression issues increases due to which there may be delays with deployments

d) Automated tests may overlook many bugs that could be identified through manual testing

Question 7:

Which statement regarding the shift-left approach is correct?

a) The shift-left approach can be achieved only with test automation and tools

b) The shift-left approach integrates manual testing practices like static analysis alongside test automation and tools

c) The shift-left approach emphasizes early testing automation, primarily involving testers in TDD, unit testing, and component integration testing

d) The shift-left approach heavily relies on both manual testing methods like reviews and automated testing practices such as TDD

Question 8:

The team has recently concluded a retrospective, during which they discussed what was successful and should be retained, as well as what was not successful and could be improved. What additional factors should the team consider discussing to further identify opportunities for process enhancement?

a) How to incorporate the improvements and retain the successes in the future?

b) What was not successful and could be improved?

c) What was successful, and should be retained

d) Why incorporate the improvements and retain the successes in the future?

Question 9:

Which one of the following is the BEST describes the incremental development model?

a) Defining requirements, designing software, and testing are done in phases where in each phase a piece of the system is added

b) A phase in the development process should begin when the previous phase is complete

c) Testing is viewed as a separate phase which takes place after development has been completed

d) Testing is added to development as an increment

Question 10:

Which statement among the following is true?

a) Compared to sequential models, iterative and incremental life cycle models emphasize delivering usable software to end-users more frequently

b) Completion of iterative incremental life cycle models is more likely to result in the delivery of the full set of features originally envisioned by stakeholders, in contrast to sequential models

c) The occurrence of overlapping test levels and activities is more prevalent in sequential life cycle models than in iterative incremental models

d) The V-model qualifies as an iterative incremental life cycle model due to the direct correlation between development and testing activities

Question 11:

Which of the following statements about Acceptance Test-Driven Development (ATDD) is true?

a) ATDD is a "test-first" approach where a test automation framework provides drafts of tests for developers, and these drafts can then be refined into executable test scripts

b) ATDD is a development approach where test cases are written collectively with stakeholders once the product is ready for acceptance testing

c) ATDD tests belong to quadrant four (Q4) and are higher-level tests than system tests

d) In ATDD, acceptance criteria can be turned into acceptance tests to drive the development of the related software

Question 12:

Which of the following is the advantage of DevOps?

a) Eliminate the need for manual system testing after the new changes are introduced

b) With CI/CD, developers don't do debugging, as defects are captured and root cause analysis is done by tools early

c) Reduces the regression risk associated with developer code refactoring

d) CI/CD reports can serve as evidence that release delays occur because developers write poor code and not because testing takes a long time

Question 13:

Which of the following best practices for achieving a "shift-left" approach are typically the responsibility of testers rather than developers?

i. TDD

ii. System testing

iii. Test system performance

iv. ATDD

v. Test component security

a) ii, iii, iv
b) ii, iv
c) ii, iii
d) ii, iii, iv, v

Question 14:

Which of the following BEST describes a tester participating in a retrospective meeting?

a) As an automation 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 provide feedback and input on all activities conducted by the team during the sprint
c) As a tester, I participate in a retrospective meeting as an observer, ensuring that the meeting adheres to the retrospective rules and agile values
d) As a tester participating in a retrospective meeting, I should introduce topics that are related to testing only. All other subjects will be covered by different participants

Question 15:

Which of the following is the BEST describes the incremental development models?

a) Testing is typically conducted towards the end of the development cycle, after the implementation phase is complete, which means that defects may not be discovered until late in the process

b) It follows a linear and sequential flow, progressing through distinct phases such as requirements, design, implementation, testing, deployment, and maintenance

c) In order to deliver increments frequently, it's crucial to have rapid feedback and perform extensive regression testing

d) It is usually used in industries where regulatory compliance and documentation are crucial, such as aerospace, defense, and healthcare

Question 16:

Which of the following is a good testing practice that applies to all software development lifecycles?

a) The importance of testing during the early stages of SDLC surpasses that of testing during later phases, primarily due to its capacity to identify more and higher priority defects

b) Different test levels have specific and different test objectives

c) All test levels have the same test objectives and goals

d) Performing detailed and comprehensive testing at lower levels makes testing at higher levels unnecessary

Question 17:

Which of the following represents a typical workflow in Test-Driven Development (TDD)?

a) Write code, Run code, Refactoring, Write test, Run test, Refactoring

b) Write test, Run test, Refactoring, Write code, Run code, Refactoring

c) Write test, Run test, Write code, Run code, Refactoring

d) Write code, Run code, Write test, Run test, Refactoring

Question 18:

Which of the following is NOT a benefit of DevOps from a testing perspective?

a) Fast feedback on the code quality, and whether changes adversely affect existing code

b) Promotes automated processes like CI/CD that facilitate establishing stable test environments

c) Test automation doesn’t require additional resources and is easy to establish and maintain

d) Increases the view on non-functional quality characteristics (e.g., performance, reliability)

Question 19:

What is the role of static analysis of source code in the Shift-Left approach?

a) It is performed after dynamic testing
b) It is performed prior to dynamic testing or as part of an automated process
c) It is not necessary in Shift-Left
d) It is performed only during the development phase

Question 20:

In a retrospective meeting, who should provide input into the testing activities on the project?

a) All but testers may have insights into possible areas of improvement for the testing, because of the testing bias
b) Everyone on the team may have insights into possible areas of improvement for the testing
c) Only developers who worked on the tested story may have insights into possible areas of improvement for the testing
d) Only business representatives who wrote requirements for the story may have insights into possible areas of improvement for the testing

Question 21:

In the context of maintenance testing, what is the PRIMARY purpose of impact analysis?

a) It assesses the system's maintainability when changes occur either to the system or the tests
b) Its objective is to evaluate if the test team can complete regression testing before the release
c) It identifies the intended outcomes and potential unintended consequences of a system modification, allowing for focused and efficient regression testing.
d) Its task is to assess the advantageous and disadvantageous effects of a test environment change

Question 22:

You work as a tester on a transportation and logistics app for a delivery service.

Your tasks are:

"To confirm that no adverse consequences within the system have been caused by a change"

What levels of testing are possibly available for you to perform?

i. Component testing

ii. Component integration testing

iii. System testing

iv. System integration testing

v. Acceptance testing

a) iii
b) iii, iv
c) iii, iv, v
d) i, ii, iii, iv

Question 23:

Which of the following options of test types addressed in the syllabus is the most complete?

a) Functional testing, Non-functional testing, Black-box testing, Specification-based testing
b) Functional testing, Non-functional testing, White-box testing, Glass-box testing
c) Functional testing, Non-functional testing, Black-box testing, White-box testing, Gray-box testing
d) Functional testing, Non-functional testing, Specification-based testing, Structural testing

Question 24:

What is the purpose of performing impact analysis before regression Testing?

a) To identify potential defects in the software
b) To optimize the extent of regression testing by determining which parts of the software could be affected by the changes
c) To prioritize test cases based on their criticality

d) To document the results of Regression Testing for future reference

Question 25:

Which of these lists of work products is the MOST SUITABLE as a test basis for acceptance testing?

a) Requirement specs (functional and non-functional), risk analysis reports, epics and user stories, models of system behavior, state diagrams
b) Sequence diagrams, interface and communication protocol specs, external interface definitions
c) Detailed design, code, data models, component specifications
d) Business processes, user or business requirements, regulations, legal contracts, and standards

Question 26:

Which of the following statements is MOST LIKELY true?

a) Non-functional testing should always be performed in the test environment that mirrors the production environment
b) Ideally, non-functional testing should be conducted in the end user's production environment
c) Ideally, non-functional testing should be conducted in the developer's environment
d) Non-functional testing sometimes necessitates a highly specific test environment, such as a usability lab for usability testing

Question 27:

Which of the following factors is NOT typically considered when determining the scope of maintenance testing?

a) The degree of risk of the change
b) The size of the existing system
c) The size of the testing team
d) The size of the change

Question 28:

Consider the following explanation of acceptance testing:

‘Testing takes place within the company responsible for developing the software. During testing, a diverse group of potential users is invited to interact with the system. Developers observe these users and make note of any issues encountered. Additionally, testing may be conducted by an independent team dedicated to testing.’

Which of the following types of acceptance testing is MOST LIKELY to be accurate based on the description provided?

a) Alpha Testing
b) Beta Testing
c) Development Acceptance Testing
d) Production Acceptance Testing

Question 29:

Which of the following statements is false about functional testing?

a) Functional testing can’t be done with the help of the test white-box test design techniques
b) Functional testing focuses on the functionality of a system, which informally is testing “what” the system does
c) Functional testing can be applied to the acceptance testing level
d) The objective of functional testing is checking whether a function or feature is complete, correct and appropriate

Question 30:

Given the following types of testing scenarios:

a. Regression testing

b. Confirmation testing

1. Testing to confirm that the recent software update did not introduce any defects in the core functionality of the application. a

2. Testing to ensure that the fix for a critical database query issue resolves the performance degradation experienced by users. b

3. Testing to ensure that the fix for a reported usability issue in the shopping cart checkout process resolves the problem b

4. Testing to ensure that the recent changes to the user permissions module do not affect the access levels of existing users a

a) 1-a, 2-a, 3-b, 4-b
b) 1-a, 2-b, 3-b, 4-a
c) 1-b, 2-a, 3-b, 4-a
d) 1-b, 2-a, 3-a, 4-b

Question 31:

Which of the following statements is true about white-box testing?

a) White-box testing sometimes needs a very specific test environment, such as a usability lab for usability testing
b) White-box testing can be only done at the component or component integration testing level
c) White-box testing assesses attributes beyond the functional characteristics of a component or system and addresses the question of "how well the system behaves"
d) White-box testing derives tests from the system's internal structure and aims to achieve adequate coverage of this structure through testing

Question 32:

You're a tester for a social media platform. A new security patch is being deployed to address a vulnerability. You're tasked with verifying that:

• The patch itself functions as intended, successfully mitigating the vulnerability.

• The core functionalities of the platform, such as posting, messaging, and newsfeed updates, remain intact after the patch is applied.

What testing are you MOST LIKELY performing?

a) Regression testing
b) Confirmation testing
c) Maintenance testing
d) Security testing

Question 33:

Consider the following explanation of the integration testing:

‘The approach where all components or systems are integrated at once, and then testing is conducted on the entire system as a whole. This method offers the advantage of completing all components before integration testing begins, eliminating the need to simulate unfinished parts. However, a significant drawback is the time-consuming and challenging nature of tracing the cause of failures during late integration.’

Which of the following integration strategy approaches is MOST LIKELY to be accurate based on the description provided?

a) Regression approach
b) Hybrid approach
c) Big-bang approach
d) Collapsing approach

Question 34:

Which of the following statements is true?

a) Black-box testing derives tests from documentation external to the test object, while the main objective of functional testing is checking the system's behavior against its specifications
b) White-box testing is limited to component and component integration testing levels, while black-box testing is limited to system and acceptance testing levels
c) Non-functional testing is the evaluation of how well the system performs what it is supposed to do, while functional testing assesses the functions that a component or system should execute
d) Black-box test techniques can be applied to black-box testing only, while structure-based test techniques are suitable for white-box testing only

Question 35:

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 had three test runs on three consecutive versions of the software as follows:

	Execution 1	Execution 2	Execution 3
TC1	(1) Passed	(4) Failed	(7) Passed
TC2	(2) Failed	(5) Passed	(8) Failed
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 confirmation tests?

a) Only 5, 6, 7, 9
b) Only 5, 7, 9
c) Only 4, 6, 8
d) Only 4, 8

Question 36:

Which of the following statements are true about component testing?

i. White-box testing is rarely done during component testing

ii. It often requires specific support, such as test harnesses or unit test frameworks

iii. The component testing environment is exactly the same as the production environment

iv. Normally performed by developers

a) i, ii, and iv
b) ii only
c) ii and iv
d) i, iii and iv

Question 37:

Which of the following provides the BEST definition of the keyword “black-box testing”?

a) Testing based on an analysis of the specification of the test object
b) A test technique based on an analysis of the specification of a component or system

c) An approach to testing in which test conditions are based on component requirements
d) Testing based on test conditions of the acceptance criteria of user stories

Question 38:

The team swiftly implements a critical solution to address an urgent issue in the production environment as the hot fix. As part of this process, the testing team conducts rapid validation of the fix, focusing on targeted functionality to ensure its effectiveness. Concurrently, checks to safeguard against unintended consequences and to verify the stability of unaffected areas. Once testing confirms the fix's success, it is promptly deployed to minimize disruption and maintain system integrity.

What testing are you MOST LIKELY performing?

a) Regression testing
b) Confirmation testing
c) Maintenance testing
d) Operational testing

Question 39:

Which of these lists of work products is the MOST SUITABLE as test basis for system testing?

a) Requirement specs (functional and non-functional), risk analysis reports, epics and user stories, models of system behaviour, state diagrams
b) Business processes, user or business requirements, regulations, legal contracts and standards
c) Detailed design, code, data models, component specifications
d) Sequence diagrams, interface and communication protocol specs, external interface definitions

Question 40:

Consider the following definitions and match the keyword (1-4) with the definition (A-D)

1. Compatibility

2. Functional appropriateness

3. Portability

4. Functional completeness

A. The degree to which a component or system can be transferred from one hardware, software or other operational or usage environment to another 3

B. The degree to which the set of functions covers all the specified tasks and user objectives 4

C. The degree to which a component or system can exchange information with other components or systems, and/or perform its required functions while sharing the same hardware or software environment 1

D. The degree to which the functions facilitate the accomplishment of specified tasks and objectives 2

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

Question 41:

What is the potential drawback of relying solely on re-running failed test cases during confirmation testing?

a) It takes too long to execute compared to other testing methods
b) It might miss regressions introduced by the fix in other areas
c) It requires testers to have a deep understanding of the code changes
d) It doesn't provide sufficient information about the fix's effectiveness

Question 42:

You work as a tester on a project involving a mobile application for food ordering, and catering to one of your clients. The client has provided you with a list of requirements. One of these requirements, which holds high priority, states: "The GET API should return the order details within 2 seconds."

Based on this scenario, what type of test should you perform?

a) Component integration, as you need to focus on testing the interfaces and interactions between components
b) Non-functional, as you need to assess how the system utilizes time, resources, and capacity while fulfilling its designated functions
c) White-box, as you need to inspect the internal structure of the system

d) Functional, as you need to verify "what" the system is intended to accomplish

Question 43:

The scope of maintenance testing primarily depends on the:

a) Complexity of the development environment
b) Size of the existing system
c) Time available for testing
d) Cost of fixing potential defects

Question 44:

You work as a business analyst on a healthcare appointment booking system for a medical clinic.

Your tasks are:

"To perform validation, check the degree to which a system can be used by users and check if the system fulfills the user's business needs"

What levels of testing are possibly available for you to perform?

a) Component integration testing
b) System testing
c) System integration testing
d) Acceptance testing

Question 45:

Which of the following statements are true about White-box testing?

i. The main objective is to cover the underlying structure by the tests to an acceptable level

ii. Focuses on compatibility, security, maintainability, and portability of the system

iii. Can be applied only to the component and component integration levels

iv. Derives tests from the code, architecture, workflows, and data flows

a) i, ii, iv
b) i, iii, iv
c) iii, iv
d) i, iv

Question 46:

How do re-testing and regression testing differ?

a) Re-testing involves running a test again; regression testing focuses on identifying unforeseen side effects
b) Re-testing aims to identify unforeseen side effects; regression testing entails re-executing those tests
c) Re-testing occurs post-defect resolution; regression testing precedes defect rectification
d) Re-testing may involve different environments, whereas regression testing typically employs the same environment

Question 47:

Who is primarily responsible for performing testing activities at the component integration testing level?

a) Testers
b) Developers
c) End users
d) System administrators

Question 48:

Your current project involves the development of a budgeting app specifically designed for a financial advisory firm.

Your task is: “To check the degree to which a component or system can be modified by the intended maintainers”

What type of testing are you MOST LIKELY performing?

a) Regression testing
b) Non-functional testing
c) Adaptability testing
d) Modifiability testing

Question 49:

Which of the following is the LEAST likely trigger for maintenance testing?

a) Planned system enhancements
b) Updating and enhancing regression test cases
c) Fixing a critical defect in the system
d) Retiring an old system and archiving its data

Question 50:

According to the ISTQB Glossary, the word 'White-box testing' is synonymous with which of the following words?

i. Specification-based testing

ii. Structure-based testing

iii. Glass-box testing

iv. Structural testing

a) none
b) i, ii
c) ii, iii, iv
d) ii, iv