Fundamentals Of Testing

### Question 1

Which of the following is the activity that removes the cause of a failure?

a) Testing

b) Dynamic testing

**c) Debugging**

d) Reverse engineering

### Question 2

Which ONE of the following can affect and be part of the (initial) test planning?

**a) Test objectives**

b) Test log

c) Failure rate

d) Use cases

### Question 3

As a tester, which of the following is a key to effectively communicating and maintaining positive relationships with developers when there is disagreement over the prioritization of a defect?

a) Escalate the issue to human resources and stress the importance of mutual respect

b) Communicate in a setting with senior management to ensure everyone understands

c) Convince the developer to accept the blame for the mistake

**d) Remind them of the common goal of creating quality systems**

### Question 4

The following statement refers to decision coverage:

“When the code contains only a single ‘if’ statement and no loops or CASE statements, and its execution is not nested within the test, any single test case we run will result in 50% decision coverage.”

Which of the following statement is correct?

a) The statement is true. Any single test case provides 100% statement coverage and therefore 50% decision coverage.

**b) The statement is true. Any single test case would cause the outcome of the “if” statement to be either true or false.**

c) The statement is false. A single test case can only guarantee 25% decision coverage in this case.

d) The statement is false. The statement is too broad. It may be correct or not, depending on the tested software.

### Question 5

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, 2

c) True – 1, 2, 4; False – 3

**d) True – 1, 4; False – 2, 3**

### Question 6

Why is software testing sometimes required for legal reasons?

a) It prevents developers from suing testers

**b) Contracts may specify testing requirements that must be fulfilled**

c) International laws require software testing for exported products

d) Testing across systems must be accompanied by legal documentation

### Question 7

Which of the following is an example of a failure in a car cruise control system?

a) The developer of the system forgot to rename variables after a cut-and-paste operation.

b) Unnecessary code that sounds an alarm when reversing was included in the system.

**c) The system stops maintaining a set speed when the radio volume is increased or decreased.**

d) The design specification for the system wrongly states speeds in km/h.

### Question 8

For which of the following situations is exploratory testing suitable?

a) When time pressure requires speeding up the execution of tests already specified.

b) When the system is developed incrementally and no test charter is available.

**c) When testers are available who have sufficient knowledge of similar applications and technologies.**

d) When an advanced knowledge of the system already exists and evidence is to be provided that it should be tested intensively.

### Question 9

Which of the following BEST describes how value is added by maintaining traceability between the test basis and test artifacts?

a) Maintenance testing can be fully automated based on changes to the initial requirements.

**b) It is possible to determine if a new test case has increased coverage of the requirements.**

c) Test managers can identify which testers found the highest severity defects.

d) Areas that may be impacted by side-effects of a change can be targeted by confirmation testing.

### Question 10

Which of the following BEST matches the descriptions with the different categories of test techniques?

1. Coverage is measured based on a selected structure of the test object.

2. The processing within the test object is checked.

3. Tests are based on defects’ likelihood and their distribution.

4. Deviations from the requirements are checked.

5. User stories are used as the test basis.

Black - Black-box test techniques

White - White-box test techniques

Experience - Experience-based test techniques

**a) Black – 4, 5 White – 1, 2; Experience – 3**

b) Black – 3 White – 1, 2; Experience – 4, 5

c) Black – 4 White – 1, 2; Experience – 3, 5

d) Black – 1, 3, 5 White – 2; Experience – 4

### Question 11

Which of the following provides the definition of the term test case?

a) A document specifying a sequence of actions for the execution of a test.

**b) A set of input values and expected results, with execution preconditions and execution postconditions, developed for a particular test condition.**

c) An attribute of a system specified by requirements documentation (for example reliability, usability or design constraints) that is executed in a test.

d) An item or event of a system that could be verified by one or more test conditions, e.g., a function, transaction, feature, quality attribute, or structural element.

### Question 12

Which one of the following options is categorized as a black-box test technique?

a) A technique based on analysis of the architecture.

b) A technique checking that the test object is working according to the detailed design.

c) A technique based on the knowledge of past faults, or general knowledge of failures.

**d) A technique based on formal requirements.**

### Question 13

Which of the following is a defect rather than a root cause in a fitness tracker?

a) Because the author of the requirements was unfamiliar with the domain of fitness training, he therefore wrongly assumed that users wanted heartbeat in beats per hour.

b) The tester of the smartphone interface had not been trained in state transition testing, so missed a major defect.

**c) An incorrect configuration variable implemented for the GPS function could cause location problems during daylight saving times.**

d) Because the designer had never worked on wearable devices before, she as designer of the user interface therefore misunderstood the effects of reflected sunlight.

### Question 14

Given that the testing being performed has the following attributes:

1. Based on interface specifications;

2. Focused on finding failures in communication;

3. The test approach uses both functional and structural test types.

Which of the following test levels is MOST likely being performed?

**a) Integration testing.**

b) Acceptance testing.

c) System testing.

d) Component testing.

### Question 15

Given the following test activities and tasks:

A. Test design

B. Test implementation

C. Test execution

D. Test completion

1. Entering change requests for open defect reports

2. Identifying test data to support the test cases

3. Prioritizing test procedures and creating test data

4. Analyzing discrepancies to determine their cause

Which of the following BEST matches the activities with the tasks?

**a) A-2, B-3, C-4, D-1**

b) A-2, B-1, C-3, D-4

c) A-3, B-2, C-4, D-1

d) A-3, B-2, C-1, D-4

### Question 16

Which of the following is a typical objective of testing?

**a) To prevent defects.**

b) To validate the project plan works as required.

c) To gain confidence in the development team.

d) To make release decisions for the system under test supported by the tester.

### Question 17

As a result of risk analysis, more testing is being directed to those areas of the system under test where initial testing found more defects than average.

Which of the following testing principles is being applied?

a) Beware of the pesticide paradox.

b) Testing is context dependent.

c) Absence-of-errors is a fallacy.

**d) Defects cluster together.**

### Question 18

Which of the following statements about test types and test levels is CORRECT?

a) Functional and non-functional testing can be performed at system and acceptance test levels, while white-box testing is restricted to component and integration testing.

b) Functional testing can be performed at any test level, while white-box testing is restricted to component testing.

**c) It is possible to perform functional, non-functional and white-box testing at any test level.**

d) Functional and non-functional testing can be performed at any test level, while white-box testing is restricted to component and integration testing.

### Question 19

A video application has the following requirement: The application shall allow playing a video on the following display resolution:

1. 640x480.

2. 1280x720.

3. 1600x1200.

4. 1920x1080.

Which of the following list of test cases is a result of applying the equivalence partitioning test technique to test this requirement?

a) Verify that the application can play a video on a display of size 1920x1080 (1 test case).

b) Verify that the application can play a video on a display of size 640x480 and 1920x1080 (2 test cases).

**c) Verify that the application can play a video on each of the display sizes in the requirement (4 test cases).**

d) Verify that the application can play a video on any one of the display sizes in the requirement (1 test case).

### Question 20

You are testing a new version of software for a coffee machine. The machine can prepare different types of coffee based on four categories. i.e., coffee size, sugar, milk, and syrup. The criteria are as follows:

- Coffee size (small, medium, large),

- Sugar (none, 1 unit, 2 units, 3 units, 4 units),

- Milk (yes or no),

- Coffee flavor syrup (no syrup, caramel, hazelnut, vanilla).

Now you are writing a defect report with the following information:

Title: Low coffee temperature. Short summary: When you select coffee with milk, the time for preparing coffee is too long and the temperature of the beverage is too low (less than 40 °C ) Expected result: The temperature of coffee should be standard (about 75 °C). Degree of risk: Medium Priority: Normal

What valuable information was omitted in the above defect report?

a) The actual test result.

**b) Identification of the tested software version.**

c) Status of the defect.

d) Ideas for improving the test case.

### Question 21

Which of the following statements on the use of checklists in a formal review is CORRECT?

a) As part of the review planning, the reviewers create the checklists needed for the review.

b) As part of the issue communication, the reviewers fill in the checklists provided for the review.

c) As part of the review meeting, the reviewers create defect reports based on the checklists provided for the review.

**d) As part of the review initiation, the reviewers receive the checklists needed for the review.**

### Question 22

In what way can testing be part of Quality Assurance?

a) It ensures that requirements are detailed enough.

**b) It contributes to the achievement of quality in a variety of ways.**

c) It ensures that standards in the organization are followed.

d) It measures the quality of software in terms of number of executed test cases.

### Question 23

Which of the following statements BEST compares the purposes of confirmation testing and regression testing?

a) The purpose of regression testing is to ensure that all previously run tests still work correctly, while the purpose of confirmation testing is to ensure that any fixes made to one part of the system have not adversely affected other parts.

**b) The purpose of confirmation testing is to check that a previously found defect has been fixed, while the purpose of regression testing is to ensure that no other parts of the system have been adversely affected by the fix.**

c) The purpose of regression testing is to ensure that any changes to one part of the system have not caused another part to fail, while the purpose of confirmation testing is to check that all previously run tests still provide the same results as before.

d) The purpose of confirmation testing is to confirm that changes to the system were made successfully, while the purpose of regression testing is to run tests that previously failed to ensure that they now work correctly.

### Question 24

Which of the following statements CORRECTLY reflects the value of static testing?

a) By introducing reviews, we have found that both the quality of specifications and the time required for development and testing have increased.

b) Using static testing means we have better control and cheaper defect management due to the ease of detecting defects later in the lifecycle.

c) Now that we require the use of static analysis, missed requirements have decreased and communication between testers and developers has improved.

**d) Since we started using static analysis, we find coding defects that might have not been found by performing only dynamic testing.**

### Question 25

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

- There is a role of a scribe

- The purpose is to detect potential defects

- The review meeting is led by the author

- Reviewers find potential defects by individual review

- A review report is produced

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

a) Informal Review

**b) Walkthrough**

c) Technical Review

d) Inspection