Fundamentals Of Testing

# Section 1 - What is Testing?

### Question 1

Testing is done to \_\_\_\_\_\_

a) To verify whether all specified requirements have been fulfilled.

b) To build confidence in the level of quality of the test object.

c) To find defects and failures.

**d) All of the above.**

### Question 2

Which of the following statements is a valid objective for testing?

a) The test should start as late as possible so that development had enough time to create a good product.

**b) To validate whether the test object works as expected by the users and other stakeholders.**

c) To prove that all possible defects are identified.

d) To prove that any remaining defects will not cause any failures.

### Question 3

How does testing contribute to software quality?

a) Testing ensures that the system under test will not error out in a production environment.

b) Testing identifies defects which ensures a successful product will be released to market.

c) Testing increases the quality of a software system by avoiding defects in the system under test.

**d) Testing through verification and validation of functionality identifies defects in the system under test.**

### Question 4

Which of the following are valid objectives for testing?

I. To find defects

II. To gain confidence in the level of quality

III. To identify the cause of defects

IV. To prevent defects

a) I, II, and III

b) II, III and IV

**c) I, II and IV**

d) I, III and IV

### Question 5

Which of the following statements correctly describes the difference between testing and debugging?

a) Testing identifies the source of defects; debugging analyzes the defects and proposes prevention activities,

**b) Dynamic testing shows failures caused by defects; debugging eliminates the defects, which are the source of failures.**

c) Testing does not remove faults; but debugging removes defects that cause the faults.

d) Dynamic testing prevents the causes of failures; debugging removes the failures

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# Section 2 - Why is Testing Necessary?

### Question 6

What is NOT a reason for testing?

**a) To enable developers to code as quickly as possible**

b) To reduce the risk of failures in operation

c) To contribute to the quality of the components or systems

d) To meet any applicable contractual or legal requirements

### Question 7

Which defects are OFTEN much cheaper to remove?

a) Usability defects found by customers

b) Defects in infrequently used functionality

**c) Defects that were detected early**

d) Minor defects that were found by users

### Question 8

Which one of the statements below describes the most common situation for a failure discovered during testing or in production?

**a) The product crashed when the user selected an option in a dialog box**

b) The wrong version of a compiled source code file was included in the build

c) The computation algorithm used the wrong input variables

d) The developer misinterpreted the requirement for the algorithm

### Question 9

Why is testing necessary?

a) Because testing is good method to make there are not defects in the software

b) Because verification and validation are not enough to get to know the quality of the software

**c) Because testing measures the quality of the software system and helps to increase the quality**

d) Because testing finds more defects than reviews and inspections

### Question 10

Which of the following could be a reason for a failure?

I. Documentation Fault

II. Software fault

III. Design fault

IV. Environment Fault

a) II is a valid reason; I, III, & IV are not

b) II, III, IV are valid reasons; I is not

c) I, II, III are valid reasons; IV & I are not

**d) All of them are valid reasons for failure**

# Section 3 - Seven Testing Principles

### Question 11

Which is not a testing principle:

a) Early testing

b) Defect clustering

c) Pesticide paradox

**d) Exhaustive testing**

### Question 12

A product owner says that your role as a tester on an Agile team is to catch all the bugs before the end of each iteration. Which of the following is a testing principle that could be used to respond to this (false) statement?

a) Defect clustering

**b) Testing shows the presence of defects**

c) Absence of error fallacy

d) Root cause analysis

### Question 13

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 14

Mr. Test has been testing software applications on mobile devices for a period of 5 years. He has a wealth of experience in testing mobile applications and achieves better results in a shorter time than others. Over several months, Mr. Test did not modify the existing automated test cases and did not create any new test cases. This leads to fewer and fewer defects being found by executing the tests. What principle of testing did Mr. Test not observe?

a) Testing depends on the environment

b) Exhaustive testing is not possible

**c) Repeating of same tests will not find new defects**

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### Question 15

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# Section 4 - Test Process

### Question 16

Which one of the following answers describes a test condition?

a) A distinguishing characteristic of a component or system

**b) A testable aspect of a component or system identified as a basis for testing**

c) The degree to which a software product provides functions which meet stated and implied needs when the software is used under specified conditions

d) Test cases designed to execute combinations of conditions and actions resulting from them

### Question 17

Though activities in the Fundamental test process may overlap or occur concurrently, identify the logical sequential process

I. Test Implementation and Execution

II. Test monitoring and control

III. Test completion

IV. Test planning

V. Test Analysis and Design

a) IV – II – I – V – III

b) IV – V – II – I – III

**c) IV – II – V – I – III**

d) IV – V – I – II – III

### Question 18

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 19

Consider the following testing activities:

1. Selecting regression tests

2. Evaluating completeness of test execution

3. Identifying which user stories have open defect reports

4. Evaluating whether the number of tests for each requirement is consistent with the

level of product risk

Consider the following ways traceability can help testing:

A. Improve understandability of test status reports to include status of test basis items

B. Make testing auditable

C. Provide information to assess process quality

D. Analyze the impact of changes

Which of the following best matches the testing activity with how traceability can assist that

activity?

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

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

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

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

### Question 20

The \_\_\_\_\_\_\_\_\_ is the activity where general testing objectives are transformed into tangible test conditions and test designs

a) Testing Planning

b) Test monitoring and control

**c) Test analysis**

d) Test implementation

### Question 21

Given the following test work products, Identify the major activity in a test process that produces it.

I. Test execution schedule

II. Test cases

III. Test progress reports

IV. Defect reports

a) I. - Test planning, II. - Test design III. - Test execution, IV. - Test implementation

b) I. - Test execution, II. - Test analysis III. - Test completion, IV. - Test execution

c) I. - Test control, II. - Test analysis, III. - Test monitoring, IV. - Test implementation

**d) I. - Test implementation, II. - Test design, III. - Test monitoring, IV. - Test execution**

### Question 22

Which of the following are Test execution tasks?

I. Reporting defects based on the failures observed

II. Verifying and updating bi-directional traceability between the test basis, test conditions, test cases, test procedures, and test results

III. Repeating test activities either as a result of action taken for an anomaly, or as part of the planned testing

IV. Executing tests either manually or by using test execution tools

V. Developing and prioritizing test procedures, and, potentially, creating automated test scripts

a) I, II, III, IV and V

b) I, III, IV and V

**c) I, II, III and IV**

d) I, III, IV

### Question 23

"Designing the test environment and identifying any required infrastructure and tools" are a part of which phase:

a) Test Implementation

**b) Test Design**

c) Test monitoring and control

d) Test planning

# Section 5 - Psychology of Testing

### Question 24

Programmers often write and execute unit tests against code which they have written. During this self-testing activity, which of the following is a tester mindset that programmers should adopt to perform this unit testing effectively?

a) Good communication skills

b) Code coverage

c) Evaluating code defects

**d) Attention to detail**

### Question 25

Which of the following qualities is MORE likely to be found in a tester’s mindset rather than in a developer’s?

a) A tester´s mindset tends to grow and mature as the tester gains experience

**b) Ability to see what might go wrong**

c) Good communication with team members

d) Attention to detail