Week 10 Practice Questions with Solutions

1] Which of the following methods are useful for testing functional correctness of an application? [MSQ]

1. code review
2. code formatting
3. automated theorem provers
4. load testing

Answer: Option 1 and 3.

Solution: Code formatting is useful for readability but does not directly help with testing. Load testing is useful for stress/load testing, not for functional testing.

2] Which of the following can generally be expected to reveal the most bugs in a program? [MCQ]

1. white box testing
2. grey box testing
3. black box testing
4. all will give similar results

Answer: Option 1.

Solution: White box testing should result in the most bugs as you can create all tests possible with the others,as well as more based on knowledge of the code.

3] ___ is a term used to describe loss of functionality due to modifications in code. [NAT]

Answer: regression.

Solution: Regression is a term used to describe loss of functionality due to modifications in code.

4] 100% code coverage during testing indicates that_ [MSQ]

1. all lines of code have been covered by at least one test.
2. the application is entirely bug free.
3. the program is tested for all input combinations.
4. the application may still have bugs.

Answer: Option 1 and 4.

Solution: 100% code coverage during testing indicates that all lines of code have been covered by at least one test but the application may still have bugs.

5] Black box testing may be preferable over white box testing because_ [MCQ]

1. black is a better colour.
2. there is less load on the server since fewer tests are needed.
3. it allows cleaner separation between the teams doing implementation and testing.

4. it requires all teams to work very closely and understand all the code.

Answer: Option 3.

Solution:

- Option 2 is not good - fewer tests means less assurance of correctness.
- Option 4 is not necessary if proper interfaces have been defined.
- Option 1 may or may not be true but has nothing to do with testing.

6] Which of the following would be considered as non-functional requirements of the Google search page?[MSQ]

1. ability to set a dark theme
2. text box to enter search query
3. Google logo
4. all of the above

Answer: Option 1 and 3.

Solution: Option 2 is a functional requirement - there has to be a place to enter the query.

7] Which of the following requires fairly detailed knowledge of the computing environment in which the application will finally run? [MCQ]

1. unit testing
2. integration testing
3. system level testing
4. none of the above

Answer: Option 3.

Solution: Others do not really need to know the platform.

8] Suppose there is a bug in a particular version of Chrome that will be triggered by some specific behaviour of your application. What kind of testing do you need to do in order to catch this problem? [MCQ]

1. Unit testing
2. Integration testing
3. System testing
4. Continuous integration

Answer: Option 3.

Solution: In order to catch the problem that is mentioned above, you will have to do system testing. Only when you include the specific browser will the bug be triggered.

9] Which of the following statements is/are true? [MSQ]

1. The main reason for using integration testing is to reduce the time taken for testing by integrating multiple tests.

2. Integration testing is used to bring out additional sources of error that may come from interactions between components.
3. Continuous integration can never overload test servers since only necessary tests will be performed.
4. It is definitely possible to overload test servers by running too many continuous integration tests.

Answer: Option 2 and 4.

Solution: Integration testing is used to bring out additional sources of error that may come from interactions between components and it is definitely possible to overload test servers by running too many continuous integration tests.

10] Consider the statements given below and choose the correct option. [MCQ]

Statement 1: Beta software refers to more advanced and therefore more stable versions of software than what is released to the public.
Statement 2: Beta software may be more advanced, but is in general less stable than release software.

1. Both statement 1 and 2 are correct.
2. Both statement 1 and 2 are incorrect.
3. Statement 1 is correct but, statement 2 is incorrect.
4. Statement 2 is correct but, statement 1 is incorrect.

Answer: Option 4.

Solution: Statement 2 is correct because beta software may be more advanced, but is in general less stable than release software and statement 1 contradicts statement 1 hence, it is incorrect.

11] Consider the statements given below and choose the correct option. [MCQ]

Statement 1: Manual testing is superior to automated testing because all test data is inspected by humans.
Statement 2: Human inspection can itself be error-prone, and will anyway reduce the number of tests that can be run.

1. Both statement 1 and 2 are correct.
2. Both statement 1 and 2 are incorrect.
3. Statement 1 is correct but, statement 2 is incorrect.
4. Statement 2 is correct but, statement 1 is incorrect.

Answer: Option 4.

Solution: Automated testing allows you to execute the test much faster than the manual approach. The risk of human errors in this case is higher.

12] White box testing involves the testing of the software code for which of the following? [MSQ]

1. The output of the code given the input.
2. The flow of specific inputs through the code.

3. The functionality of conditional loops.

4. All of above

Answer: Option 2 and 3.

Solution: One of the basic goals of whitebox testing is to verify a working flow for an application. It might involve The flow of specific inputs through the code or The functionality of conditional loops. The testing of input and the output is a part of black-box testing.