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1. Which of the following statements is a key principle of testing?

1 / 1 point

- ☐ You should prefer manual tests over automated tests.
- ☒ You can only test for the factors that you know.
- ☐ You can save testing for the beta stage onward.
- ☐ You should run as few software tests as possible.



Correct

Correct. No matter how well developers design a product, they can only test what they know.

2. Testing has which of the following benefits for development?

1 / 1 point

- ☐ Reduces project spending
- ☐ Increases code readability
- ☐ Produces file backups
- ☒ Improves code quality



Correct

Correct. Testing allows developers to refactor code and add new features with confidence.

3. At which level of the software testing process do developers test the entire software process?

1 / 1 point

- ☐ Acceptance testing
- ☐ Unit testing
- ☒ System testing
- ☐ Integration testing



Correct

Correct. In system testing, developers ensure that the entire system works together.

4. What is the purpose of integration testing?

1 / 1 point

- ☐ Assess the system's acceptability for delivery
- ☐ Evaluate compliance with specific technical requirements
- ☒ Expose flaws in the interaction between components
- ☐ Validate that each unit performs as designed



Correct

Correct. The purpose of integration testing is to expose flaws in the interaction between integrated units or components.

5. Behavior driven development (BDD) ensures which of the following for developers?

1 / 1 point

- ☐ Writing concise code
- ☒ Building correct software
- ☐ Identifying the code's purpose
- ☐ Bolstering customer service



Correct

Correct. BDD ensure that developers are building the correct software.

6. In the basic workflow for test driven development (TDD), what happens in the third step?

1 / 1 point

- ☒ Improve the code's quality.
- ☐ Create the test case.
- ☐ Describe the system's behavior.
- ☐ Write the program code.



Correct

Correct. In the third step in the basic TDD workflow, developers refactor the code to improve its quality.

7. In which Python testing framework can you use nearly an infinite number of setup and teardown levels?

1 / 1 point

- ☐ PyUnit
- ☐ Doctest
- ☐ RSpec
- ☒ Pytest



Correct

Correct. With Pytest, you can use nearly an infinite number of setup and teardown levels.

8. Assume you are using Python and have installed PyUnit, Nose, and Pinocchio. Which of the following commands can you use to perform unit tests and receive color-coded output?

1 / 1 point

- ☐ unittest --with-spec --cover-tests
- ☐ unittest --with-spec --spec-color
- ☐ nosetests --with-spec --cover-tests
- ☒ nosetests --with-spec --spec-color



Correct

Correct. To perform unit tests and receive color-coded output, run nosetests --with-spec --spec-color.

9. Which of the following PyUnit assertions is useful for determining if an object is in a result set?

1 / 1 point

- ☐ assertRegex()
- ☐ assertIsInstance()
- ☐ assertLogs()
- ☒ assertIn()



Correct

Correct. The assertion assertIn(a, b) checks if "a" is in the collection known as "b." This assertion is useful for determining if an object is in a result set.

10. PyUnit provides six test fixtures. Assume you include all six in a test module. Which of the following sequences shows the order in which the test runner will execute the final three test fixtures?

1 / 1 point

- ☐ tearDownClass, tearDownModule, tearDown
- ☐ setUpModule, tearDownModule, tearDown
- ☐ tearDownModule, setUpModule, tearDownClass
- ☒ tearDown, tearDownClass, tearDownModule



Correct

Correct. The last three test fixtures that the test runner will execute, in order, are tearDown, tearDownClass, and then tearDownModule.

11. How does a missing test coverage report help developers improve their testing?

1 / 1 point

- ☐ Lists functions that respond to exceptions appropriately
- ☐ Announces when no bugs remain in the code
- ☐ Shows the lines of code that have coverage
- ☒ Reveals lines of code that need test cases



Correct

Correct. A missing test coverage report can reveal which lines were not tested so that developers can write more test cases that execute those lines.

12. When generating fakes in Python, what is one advantage of using the Faker class to generate fake data?

1 / 1 point

- ☒ Creates a diverse set of test data
- ☐ Uses a small amount of code
- ☐ Decreases the number of attributes to test
- ☐ Arranges the test results in a logical order



Correct

Correct. Faker's providers generate a large, diverse set of data for the given attribute, such as address or barcode. The larger and more diverse your test data, the more comprehensive and reliable your testing will be. You may catch many bugs for which you might not have tested otherwise.

13. Developers should use mocking for which of the following purposes?

1 / 1 point

- ☐ Ensure that database transactions actually work
- ☐ Avoid calls of untested code
- ☒ Isolate their tests from a remote component
- ☐ Include internal systems in their testing



Correct

Correct. Developers should mock any component to which they don't have a remote connection if that component is important for testing.

14. For which of the following purposes is it useful to patch return values with data?

1 / 1 point

- ☐ Testing objects with method calls
- ☐ Testing mocks
- ☒ Controlling data returned from a function call
- ☐ Testing objects that call other objects



Correct

Correct. Patching a function's return value with data is useful for controlling the data returned from a function call. You can pass back any data structure or object that your program expects. By using the return\_value patch, you can return anything that can be sent back as a return value from a function call.

15. Developers use mock objects for which of the following purposes?

1 / 1 point

- ☐ Change a function call's parameters
- ☒ Mimicking a real object
- ☐ Identifying a sad path
- ☐ Generating a data set



Correct

Correct. Developers use mock objects to mimic the behavior of real objects in ways that the developers can control.