2024-12-06

**Testing Automation in Python - theoretical assessment**

Total: 50 points  
Passing score: 70% (35 points)  
Time: 90 minutes

Hi, Rafal. When you submit this form, the owner will see your name and email address.

1.What does the method items() returns in Python Dictionary?

(1 Point)

The method items() returns the lists

The method items() returns the tuples

The method items() returns the keys in a list

The method items() returns the values in a list

2.Which of the following statements is true ?

(1 Point)

A test suite is a collection of various test cases that are intended to test a behavior or set of behaviors of software application or system.

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A test run is a collection of various test cases that are intended to test a behavior or set of behaviors of software application or system.

A test run is a collection of only one test case that is intended to test a behavior of software application or system.

3.Which of these statements best describes the Test Double known as a Spy?

(1 Point)

"Spy" is another word for "Fake"

A Spy records interactions so you can later assert something happened to it

To create a Spy, you subclass unittest.mock.Spy

Spy objects are null or empty values that you pass when arguments are required, but not used

4.An integer number preceded by an 0x (Zero-x) will be treated as:

(1 Point)

Octal

Binary

Hexadecimal

Decimal

5.The meaning of positional parameter is determined by:

(1 Point)

Position

Name

Style

None

6.What is the output of the following code?  
  
x = "Python"  
print(x[1:4])

(1 Point)

7.Write the pytest marker that conditionally skips the test if it is run on a Python version earlier than 3.8 ( sys.version\_info<(3,3) ) with an optional reason: "Requires Python 3.3 or later."

(1 Point)

8.What does the following code print?  
  
print('Python'[1])

(1 Point)

9.How does unittest require you to name your test methods?

(1 Point)

Test methods must be named using snake\_case; that is, with underscores between words

Test method names must begin with unittest\_

Test method names must begin with test\_

Test methods must be annotated @unittest.test

10.Knowing that *pytest --durations* option allows to identify slow tests, write the command that will report five slowest tests.

(1 Point)

11.Which of these statements best describes the Test Double known as a Dummy?

(1 Point)

A Dummy will fail the test if its methods are not called as expected

"Dummy" is another word for "Stub"

Dummy objects are null or empty values that you pass when arguments are required, but not used

A Dummy has a working implementation, but is unsuitable to use in production

12.When you have a large test suite, you might want to run a subset of tests. Which of the following methods can you use with pytest to achieve this?

(1 Point)

Alphabetical sorting with the -a parameter

Time-based execution with the -t parameter

Test categorization with the -m parameter

Trigger --subset command

13.Which of these statements best describes the Test Double known as a Fake?

(1 Point)

A Fake has a working implementation, but is unsuitable to use in production

A Fake will fail the test if its methods are not called as expected

A Fake has no logic or advanced behavior

"Fake" is another word for "Mock"

14.The following code:   
  
x = "\\\\"  
print(len(x))

(1 Point)

will print 2

will print 1

will print 3

will cause an error

15.Which of the following commands will discover and execute the doctests found in Python files in the current working directory?

(1 Point)

python -m doctest

python -m unittest

python -m pytest --doctest-modules

python -m docstring \*.py

16.How do you define a test fixture with Pytest?

(1 Point)

Override set\_up() and (optionally) tear\_down()

Decorate a function with @pytest.set\_up and (optionally) another with @pytest.tear\_down

Decorate a function with @pytest.fixture

Subclass pytest.Fixture

17.Write the output of the following code.   
  
print([x for x in range(10) if x % 2 == 0])

(1 Point)

18.Which line indicates "act" part of a test?  
  
def test\_lookup\_by\_name(self):  
      self.phonebook.add("Bob","12345")  
      number = self.phonebook.lookup("Bob")  
      self.assertEqual(number,"12345")

(1 Point)

self.assertEqual(number,"12345")

number = self.phonebook.lookup("Bob")

self.phonebook.add("Bob","12345")

def test\_lookup\_by\_name(self):

19.What is the correct syntax for defining a function in Python?

(1 Point)

function my\_function():

def my\_function():

def my\_function:

function my\_function:

20.If a list passed into function’s argument and modified inside the function:

(1 Point)

Will affect the argument

Will not affect the argument

Will give an error

Will become global by default

21.The following code:   
print(float("1.3"))

(1 Point)

will raise a ValueError exception

will print 1.3

will print 1,3

will print 13

22.Which of these statements best describes the Test Double known as a Mock?

(1 Point)

A Mock has a working implementation, but is not suitable to use in production

"Mock" is another word for "Collaborator"

A Mock will fail the test if its methods are not called as expected

Mock objects are null or empty values that you pass when arguments are required, but not used

23.What is a syntax of assertFalse() method ?

(1 Point)

assertFalse(testValueA, testValueB, message)

assertFalse(testValue, message)

assertFalse(key, container, message)

assertFalse(key, value)

24.When you run a test suite in pytest, the output provides several pieces of information.

(1 Point)

In the pytest output, a dot (.) indicates a test that passed, an F indicates a test that failed, and an E indicates a test that raised an unexpected exception.

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In the pytest output, a dot (.) indicates a test that passed, an F indicates a test that passed, and an E indicates a test that raised an unexpected exception.

In the pytest output, a dot (.) indicates a skipped test, an F indicates a test that failed, and an E indicates a test that raised an unexpected exception.

25.Which of the following is not a valid variable name in Python?

(1 Point)

variable1

\_variable

2variable

variable\_name

26.When using the unittest framework, which of these statements is true about the Arrange part of a test case?

(1 Point)

It should be only one line of code, in the tearDown method

It could be several lines of code, partly in setUp and partly in the test case

It should be only one line of code, in the setUp method

It could be several lines of code, partly in the test case and partly in tearDown

27.Which keyword is used in block with exceptions in Python?

(1 Point)

try

except

finally

all of the above

28.What is the syntax for declaring a parameterized test in Pytest?

(1 Point)

Use a context manager sub\_test within the test case

Name your test function parametrized\_test\_

Use a context manager subTest within the test case

Decorate the test function with @pytest.mark.parametrize

29.Which of the following statements is NOT true about unit tests?

(1 Point)

Unit tests help protect you from regression errors

Unit tests help you to design testable code

Unit tests will help catch integration errors

Unit tests help document what the system does

30.A set of rules which defines the ways in which words can be coupled in sentences is called:

(1 Point)

lexis

syntax

semantics

dictionary

31.If there are more than one "except:" branches after the "try:" clause, we can say that:

(1 Point)

exactly one except: block will be executed

none of the except: blocks will be executed

one or more except: blocks will be executed

not more than one except: block will be executed

32.Which of these statements is true of Pytest?

(1 Point)

Pytest test cases inherit from pytest.TestCase

Pytest is designed for Python, and it uses a "Pythonic" style

Pytest comes with the standard Python distribution

Pytest is a member of the xUnit family

33.Which of the following characters or character sequences does doctest interpret as a wildcard when given the ELLIPSIS directive?

(1 Point)

.

""

...

\*\*

34.Which of these statements best describes the Test Double known as a Stub?

(1 Point)

"Stub" is another word for "Mock"

To create a Stub, you subclass unittest.mock.Stub

A Stub has no logic or advanced behavior

A Stub will fail the test if its methods are not called as expected

35.Write the command that allows for running only the tests that are marked with a specific category (i.e. slow) using pytest.

(1 Point)

36.Which of the following statements is false?

(1 Point)

setUp() executes before every single test case

tearDown() executes after every single test method

tearDown() executes after all test method

setUp() and tearDown() methods help avoiding code duplication

37.Which of the following is incorrect for a dictionary in Python?

(1 Point)

each key must be unique

the key should be an immutable object

the len() function returns the sum of key-value elements in the dictionary

the len() function returns the numbers of key-value elements in the dictionary

38.What is the purpose of the assertRaises() method?

(1 Point)

It is used to verify that a given method or function raises a specified exception when called

It checks that a given condition is True

It checks that a given condition is False

It checks that a given condition is None

39.Which of the following expression evaluate to a zero result?

(1 Point)

2 \*\* 3 / 5 - 2

4 / 2 \*\* 3 - 2

1 \*\* 3 / 4 - 1

1 \* 4 // 2 \*\* 3

40.What will be the output of the following code?  
  
for i in range(2, 5):  
    print(i, end='-')

(1 Point)

41.What will be the output of the following code?   
  
print(3 \* '7')

(1 Point)

42.When writing tests in pytest, if you find yourself repeating the same test data across multiple tests, then you can use a fixture to avoid duplication. Fill in the example presented below with pytest decorator to define a fixture with a function.   
  
import pytest  
  
# *Here is the place for your answer*   
def example\_people\_data():   
      return [   
            {   
               "given\_name": "Ana",   
               "family\_name": "Benn",  
               "title": "Senior Software Engineer",  
             },  
            {   
               "given\_name": "Sana",   
               "family\_name": "Menn",   
               "title": "Project Manager",  
             },   
       ]   
def test\_format\_data\_for\_display(example\_people\_data):  
       # Further test code ...

(1 Point)

43.Which of the following is a mutable data type in Python?

(1 Point)

tuple

list

string

frozenset

44.If the class constructor is declared in the following way:  
  
class Class:  
    def \_\_init\_\_(self, val=0):  
        pass  
  
which one of the assignments is invalid?

(1 Point)

object = Class()

object = Class(None)

object = Class(1)

object = Class(1,2)

45.Write the pytest marker that skips the test with an optional reason: "This test is temporarily disabled."

(1 Point)

46.What does the following list comprehension do?   
*[x for x in range(10) if x % 2 == 0]*

(1 Point)

Creates a list of odd numbers from 0 to 9

Creates a list of even numbers from 0 to 9

Creates a list of numbers from 0 to 10

Creates a list of numbers from 0 to 9

47.Which of the following are correct statements?

(1 Point)

True + 1 evaluates to 1

True and False evaluates to True

True or False evaluates to False

7 + False evaluates to 7

48.An operator capable of carrying out bitwise shifts is coded as

(1 Point)

–

++

>>

,

49.A complete set of commands is known as:

(1 Point)

Instruction list

Code laws

Command-line

Command list

50.Which method would you use to compare two dictionary objects in unittest?

(1 Point)

.assertListEqual(a,b)

.assertDictEqual(a,b)

.assertSetEqual(a,b)

.assertDictSimilar(a,b)