Week 10 Graded Questions with Solutions

1] You are creating a form for entering data for a new employee in a company. Which of the following are essential functional tests for this code? [MSQ: 2 points]

1. Response of form when the name field gets special characters as input.
2. Response of form when Chinese characters are entered for the name.
3. Colour of page background.
4. Whether the page appears in the top search ranking of Google search results.

Answer: Option 1 and 2.

Solution: Colouring the page background is not an essential functional test and the top search ranking is not something that can be tested as part of program specification.

2] Which of the following groups of people would be considered stakeholders in terms of requirements gathering for an online ecommerce application like Amazon or Flipkart? [MSQ: 1 point]

1. Government regulators
2. Customers
3. Sellers
4. Internet service providers

Answer: Option 2 and 3.

Solution: The cutomers and sellers are groups of people would be considered stakeholders in terms of requirements gathering for an online ecommerce application like those mentioned. Others may impact the use of the system but play no role directly in the requirements.

3] Consider the statements given below and choose the correct option. [MCQ: 3 points]

Statement 1: 100% statement coverage automatically implies 100% branch coverage.
Statement 2: 100% branch coverage automatically implies 100% statement coverage.

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 2.

Solution: 100% statement coverage does not imply 100% branch coverage as each option of the branch needs to be covered. Statement 2 is incorrect because both parts of a branch are covered, this definitely means that all statements involving branches are covered, but does not say anything about other statements.

4] Consider the statements given below and choose the correct option. [MCQ: 2 points]

Statement 1: Unit testing tries to reduce the number of tests by combining multiple tests into a single unit.

Statement 2: Unit testing can be done even if the inputs and outputs are unclear or only vaguely defined.

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 2.

Solution: Statement 1 is incorrect as unit testing actually tries the opposite. Statement 2 is incorrect as unit testing requires clear specifications of input and output.

5] If you write a browser automation test that will randomly click on different parts of a web-page several times, what kind of errors is it likely to catch? [MSQ: 2 points]

1. Errors from broken links.
2. Error from submitting empty data in a form.
3. Validation errors in an email input field.
4. Errors in colour scheme implementation.

Answer: Option 1 and 2.

Solution: Validation errors in an email input field and errors in colour scheme implementation have no connection with random clicking.

6] Consider the code below. [MCQ: 3 points]

```
int foo (int x, int y)
{
    int z=0;
    if ((x > 0) && (y > 0))
    {
        z=x;
    }
    return z;
}
```

Assuming that we are calling function foo(1, 0). Which of the following coverage methods will satisfy the test cases completely?

1. Condition coverage
2. Statement coverage
3. Branch coverage
4. Function coverage

Answer: Option 4.

Solution: Whenever we call foo(1, 0), it will not satisfy either of the conditions (i.e., (x>0) && (y>0)) and thus it will not have 100% condition coverage. Now if the condition will not satisfy, so it will not able to go inside the 'if' condition and thus it will not have 100% branch coverage and 100% statement coverage.

7] Test fixtures are used to___ [MCQ: 1 point]

1. detect code that needs to be tested.
2. set up the environment and data needed for a test.
3. format code neatly for testing.
4. None of the above

Answer: Option 2.

Solution: Test fixtures are used to set up the environment and data needed for a test.