| | |
|---|---|
| **Started on** | Thursday, 14 November 2024, 3:30 PM |
| **State** | Finished |
| **Completed on** | Thursday, 14 November 2024, 3:59 PM |
| **Time taken** | 28 mins 58 secs |
| **Grade** | **10.50** out of 15.00 (**70**%) |

Question **1**

Correct

Mark 1.00 out of 1.00

With reference to the table given in the description for ISP, how many tests are needed for each choice criterion?

a. Five tests.

b. Two tests.

c. Four tests. ✔

d. Three tests.

The correct answer is:
Four tests.

Question **2**

Correct

Mark 1.00 out of 1.00

What will the test input (numbers, val) = ([1,2],1) do for the mutant given in the description?

a. It will weakly kill the mutant.

b. It will strongly kill the mutant. ✔

The correct answer is:
It will strongly kill the mutant.

Question **3**

Correct

Mark 1.00 out of 1.00

Which of the following represents a correct order of subsumption among coverage criteria for input space partitioning? In the options below, read→as `subsumes'.

a. Pair-wise coverage → Base choice coverage → Each choice coverage.

b. Each choice coverage → Base choice coverage → All combinations coverage

c. All combinations coverage → Base choice coverage → Pair-wise coverage

d. Multiple base choice coverage → Base choice coverage → Each choice coverage ✔

The correct answer is:
Multiple base choice coverage → Base choice coverage → Each choice coverage

Question **4**

Correct

Mark 1.00 out of 1.00

Which of the following statements is true about the mutant in line 4.

a. The mutant is not reachable if the array is null.

b. The mutant is reachable only if the array is not null.

c. The mutant is always reachable even if the array is null. ✔

d. The mutant is not reachable at all.

The correct answer is:
The mutant is always reachable even if the array is null.

Question **5**

Correct

Mark 1.00 out of 1.00

State true or false: Pair-wise coverage and T-wise coverage criteria consider the functionality and interfaces while considering combinations.

Select one:

True

False ✔

The correct answer is 'False'.

Information

Answer the following questions based on the characteristics and blocks given in the table below.

## Partitions-table

| Characteristic | Block-1 | Block-2 | Block-3 | Block-4 |
|---|---|---|---|---|
| Value1 | < 0 | 0 | > 0 | |
| Value2 | < 0 | 0 | > 0 | |
| Operation | + | - | * | / |

Answer the questions on ISP based on this table.

Question **6**

Correct

Mark 1.00 out of 1.00

With reference to the table given in the description, how many tests are required to satisfy the All combinations criterion?

a. 27 tests.

b. 32 tests.

c. 48 tests.

d. 36 tests. ✔

The correct answer is:
36 tests.

Question **7**

Correct

Mark 1.00 out of 1.00

Mutation of the statement `if (x < 3 && y >= 0)' to the statement `if (x <= 3 && y >= 0)' is an example of which kind of mutation operator?

a. Relational operator replacement ✔

b. Arithmetic operator replacement.

c. Relational operator insertion.

d. Conditional operator replacement.

The correct answer is:
Relational operator replacement

Question **8**

Incorrect

Mark 0.00 out of 1.00

For boundary value analysis to be applied to a set of inputs, which of the following must be true?

a. There must be values just outside the input range, inputs need not be ordered.

b. Inputs must be from an ordered set, there must be values just outside the input range.

c. Boundary values must be well-defined, inputs can be from any kind of set. ✖

d. It all depends on the requirements, inputs can be from any set.

The correct answer is:
Inputs must be from an ordered set, there must be values just outside the input range.

Question **9**

Partially correct

Mark 0.50 out of 1.00

With reference to the table given in the ISP description, how many tests are required to satisfy the Base Choice criterion? Assume that the base choices are Value1 >= 0, Value2 >=0 and +.

a. Six tests.

b. Seven tests. ☑

c. Eight tests.

d. Five tests.

The correct answer is:
Eight tests.

Question **10**

Correct

Mark 1.00 out of 1.00

State true or false: The test input (numbers, val) = ([1,1],1) will, strongly kill the mutant in line 4 for the program given in the description.

Select one:

True

False ✔

The correct answer is 'False'.

Question **11**

Incorrect

Mark 0.00 out of 1.00

State true or false:Mutation testing subsumes all combinations logic coverage criterion.

Select one:

- True ✖
- False

The correct answer is 'False'.

Question **12**

Incorrect

Mark 0.00 out of 1.00

In the list of mutation operators for source code, the Boolean constants True and False can be used to replace which of the following operators?

- a. They can replace relational operators only.
- b. They can replace conditional operators only.
- c. They can replace logical operators only. ✖
- d. They can replace both logical and relational operators.

The correct answer is:
They can replace both logical and relational operators.

Question **13**

Correct

Mark 1.00 out of 1.00

State true or false: While doing functional testing of a program, it is always possible to map the program's inputs as test case inputs and the program's outputs as the test case outputs.

Select one:

- True
- False ✔

The correct answer is 'False'.

Question **14**

Incorrect

Mark 0.00 out of 1.00

State yes or no: It is always possible to find a test input that satisfies reachability but not infection for the mutant in line 4 given in the description?

a. Yes. ✖

b. No.

The correct answer is:
No.

Information

Consider the method findVal() below. Line 4 is mutated as 4' in the code below. Answer the questions related to the given mutant in the method.

```
// Effects: If array numbers is null, throw NullPointerException.
// Else, return LAST occurrence of val in numbers[]. If val is not in numbers[], return -1.
1. public static int findVal(int numbers[], int val)
2. {
3.    int findVal = -1;
4.    for (int i = 0; i < numbers.length; i++)
4'.    // for (int i = 1; i < numbers.length; i++)
5.        if (numbers[i] == val)
6.            findVal = i;
7.    return (findVal);
8. }
```

Question **15**

Correct

Mark 1.00 out of 1.00

While using mutation testing to test a program, how many mutation operators are applied in one step of the mutation testing process?

a. It is decided by the target mutation score.

b. Usually only one mutation operator at a time. ✔

c. It depends on how many mutants can be killed.

d. Usually a small number of mutation operators based on need.

The correct answer is:
Usually only one mutation operator at a time.

◄ Announcements

Jump to...

CSE731-Software-Testing-T1-24-25-Quiz2-Set2 ►