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Week 6 : Assignment 6

The due date for submitting this assignment has passed.

Due on 2022-09-07, 23:59 IST.

Assignment submitted on 2022-09-07, 23:47 IST

1) While applying logic-based testing to test source code, is it true that the predicates can be taken exactly as they occur in code always? ***1 point***

- Yes, the predicates can be considered exactly as they occur in code.
- No, some times we have to add extra clauses to the predicate

Yes, the answer is correct.
Score: 1

Accepted Answers:
No, some times we have to add extra clauses to the predicate

2) How do logical predicates occur in finite state machines? ***1 point***

- The logical predicates occur as a part of the states of the finite state machines.
- The logical predicates occur as guards in the transitions of the finite state machines.

Yes, the answer is correct.
Score: 1

Accepted Answers:
The logical predicates occur as guards in the transitions of the finite state machines.

3) In a requirements specification document, where do logical predicates occur? ***1 point***

- They occur directly as a part of the requirements.
- They occur as pre-conditions, invariants and post-conditions in the requirements.
- All the conditions in requirements can be translated into predicates.
- Logical predicates cannot be found in requirements.

Yes, the answer is correct.
Score: 1

Accepted Answers:
They occur as pre-conditions, invariants and post-conditions in the requirements.

Answer the following questions for the method **`twoPred()`** below.
The method is called with two input parameters **`x`** and **`y`**.

```
public String twoPred (int x, int y)
{
    boolean z;
    if (x < y)
        z = true;
    else
        z = false;
    if (z && x+y == 10)
        return z;
    else
        return z-1;
}
```

4) State true or false: The internal variable z in the second predicate needs to be re-written in terms of the input parameters x and y. ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
True

5) Is it true that predicate coverage for the first predicate will also subsume predicate coverage for the second predicate? ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
False

6) How many test cases will be needed for clause coverage for the second predicate if we explicitly count the true and false values for each clause? ***1 point***

- Two test cases.
- Four test cases

No, the answer is incorrect.
Score: 0
Accepted Answers:
Four test cases

7) State true or false: The set of test case inputs $\{(x = 5, y = 3), (x = 4, y = 6), (x = 5, y = 6)\}$ will satisfy clause coverage for the predicate. ***1 point***

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- (●) True
- ( ) False

Yes, the answer is correct.
Score: 1
Accepted Answers:
True

8) State yes or no: The set of test case inputs $\{(x = 5, y = 3), (x = 4, y = 6), (x = 5, y = 6)\}$ ***1 point***

- (●) Yes
- ( ) No

Yes, the answer is correct.
Score: 1
Accepted Answers:
Yes

9) How many test cases are needed for satisfying RACC for all the clauses for the second predicate? ***1 point***

- ( ) Only one test case
- ( ) Two test cases
- (●) Three test cases
- ( ) Five test cases

Yes, the answer is correct.
Score: 1
Accepted Answers:
Three test cases

10) State true or false: The set of test case inputs $\{(x = 4, y = 6), (x = 6, y = 4), (x = 4, y = 5)\}$ satisfy RACC for the second predicate. ***1 point***

- (●) True
- ( ) False

Yes, the answer is correct.
Score: 1
Accepted Answers:
True