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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Software Testing (course)

Course outline

How does an NPTEL online course work? ()

Pre-requisite Assignment ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

Week 6 ()

● Logic Coverage Criteria: Applied to Test Code_1 (unit? unit=52&lesson=53)

● Logic Coverage Criteria:

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



Applied to Test
Code_2 (unit?
unit=52&lesson=54)

Logic
Coverage
Criteria: Issues
in Applying to
Test Code
(unit?
unit=52&lesson=55)

Logic
Coverage
Criteria:
Applied to Test
Specifications
(unit?
unit=52&lesson=56)

Logic
Coverage
Criteria:
Applied to
Finite State
Machines
(unit?
unit=52&lesson=57)

Practice: Week
6 : Assignment
6 (Non
Graded)
(assessment?
name=116)

Quiz: Week 6
: Assignment
6
(assessment?
name=141)

Week 6
Feedback
Form:
Software
Testing (unit?
unit=52&lesson=129)

Week 7 ()

Week 8 ()

Week 9 ()

Week 10 ()

Week 11 ()

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**



Week 12 ()**Learning
Materials ()****DOWNLOAD
VIDEOS ()****Text
Transcripts ()****Live
sessions ()****Books ()**☒ 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

