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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=42&lesson=43)

☐ Logic Coverage  
Criteria:  
Applied to Test Code\_2 (unit? unit=42&lesson=44)

# Assignment 6

The due date for submitting this assignment has passed.

**Due on 2020-10-28, 23:59 IST.**

Assignment submitted on 2020-10-27, 11:01 IST

1) State yes or no: If a specification predicate is in Conjunctive Normal Form (CNF) then, a major clause can be made active by making all other clauses true. **1 point**

- ☒ Yes.  
☐ No.

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
Yes.

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

- ☐ They occur in the specification of finite state machines.  
☐ They occur at decision points in finite state machines.  
☒ They occur as guards in transitions of finite state machines.  
☐ They occur in the nodes of finite state machines.

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*They occur as guards in transitions of finite state machines.*

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

```
public String twoPred (int x, int y)
```

☐ Logic  
Coverage  
Criteria: Issues  
in Applying to  
Test Code  
(unit?  
unit=42&lesson=45)

☐ Logic  
Coverage  
Criteria:  
Applied to Test  
Specifications  
(unit?  
unit=42&lesson=46)

☐ Logic  
Coverage  
Criteria:  
Applied to  
Finite State  
Machines  
(unit?  
unit=42&lesson=47)

☐ Feedback for  
week 6 (unit?  
unit=42&lesson=48)

☒ **Quiz:**  
**Assignment 6**  
**(assessment?**  
**name=122)**

**Week 7**

**Week 8**

**Week 9**

**Week 10**

**Week 11**

**Week 12**

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```
{
    boolean z;
    if (x < y)
        z = true;
    else
        z = false;
    if (z && x+y == 10)
        return "A";
    else
        return "B";
}
```

3) The second predicate contains the variable **z** and can be re-written in terms of **x** and **y**. Which of the following represents the re-written second predicate? **1 point**

- ☐ (True && (x+y == 10) .
- ☒ ((x<y) && (x+y == 10) .

Yes, the answer is correct.

Score: 1

Accepted Answers:

((x<y) && (x+y == 10) .

4) State yes or no: Predicate coverage for the first predicate **will not** ensure predicate coverage for the second predicate. **1 point**

- ☒ Yes.
- ☐ No.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Yes.

5) 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.

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

- ☒ True.
- ☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

7) State yes or no: The set of test cases  $\{(x = 5, y = 3), (x = 4, y = 6), (x = 5, y = 6)\}$  will also satisfy predicate coverage for the **1 point**

first and second predicates.

- ☒ Yes.  
☐ No.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Yes.

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

- ☐ Two test cases.  
☒ Three test cases.  
☐ Four test cases.  
☐ Six test cases.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Three test cases.

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

- ☒ True.  
☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

10) State true or false: RICC has no feasible pairs of test cases for the second predicate to be true. **1 point**

- ☒ True.  
☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.