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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

- ☐ Assignment 4:  
Graph Coverage Criteria (unit? unit=45&lesson=46)
- ☐ Logic: Basics Needed for Software Testing (unit? unit=45&lesson=47)
- ☐ Logic: Coverage Criteria (unit? unit=45&lesson=48)

# Week 5: Assignment 5

The due date for submitting this assignment has passed.

**Due on 2021-09-01, 23:59 IST.**

Assignment submitted on 2021-09-01, 22:03 IST

1) For a predicate with  $n$  clauses, how many test requirements suffice to achieve active clause coverage? **1 point**

☐

$n$  test requirements.

☒

$n + 1$  test requirements.

☐

$n - 1$  test requirements.

☐

$2n$  test requirements.

Yes, the answer is correct.

Score: 1

Accepted Answers:

$n + 1$  test requirements.

2) State true or false: Correlated ICC does not make sense as the major clause does not determine the predicate. **1 point**

☒

True.

☐

False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

☐ Coverage Criteria, Contd. (unit? unit=45&lesson=49)

☐ Logic Coverage Criteria (unit? unit=45&lesson=50)

☐ Week 5 Feedback Form: Software Testing (unit? unit=45&lesson=51)

☐ Practice: Week 5: Assignment 5 (Non Graded) (assessment? name=114)

☒ Quiz: Week 5: Assignment 5 (assessment? name=128)

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

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3) For a predicate  $p$  and a clause  $c$  in  $p$ , if  $p_c$  evaluates to false, then which of the following holds true?

1 point

☐

ACC criteria are infeasible for  $p$  with respect to  $c$ .

☐

ICC criteria are infeasible for  $p$  with respect to  $c$ .

Yes, the answer is correct.

Score: 1

Accepted Answers:

ACC criteria are infeasible for  $p$  with respect to  $c$ .

4) Which of the following represents a correct order of subsumption among logic coverage criteria? In the options below, read  $\rightarrow$  as "subsumes".

1 point

☐

Combinatorial coverage  $\rightarrow$  GACC  $\rightarrow$  Clause coverage.

☐

Combinatorial coverage  $\rightarrow$  GACC  $\rightarrow$  Predicate coverage.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Combinatorial coverage  $\rightarrow$  GACC  $\rightarrow$  Clause coverage.

For the questions below, consider a predicate  $p = (a \vee b) \wedge (c \vee d)$ . Answer the following questions with reference to applying the various logic coverage criteria on this predicate.

5) How many clauses are there in the predicate  $p$ ?

1 point

☐

One.

☐

Two.

☐

Three.

☒

Four.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Four.

6) What is the value of  $p$  when  $a = b = d = \text{True}$  and  $c = \text{False}$ ?

1 point

☒

True.

☐

False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

7) For how many combinations of values of the various clauses, does the predicate  $p$  become false?

1 point

☐

Two.

☐

Four.

☒

Seven.

☐

Eight.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Seven.*

8) Which of the following is  $p_a$ , the predicate under which clause  $a$  determines  $p$ ? **1 point**

☐

$$p_a = b \wedge (c \vee d).$$

☒

$$p_a = \neg b \wedge (c \vee d).$$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$$p_a = \neg b \wedge (c \vee d).$$

9) Which of the following is  $p_c$ , the predicate under which clause  $c$  determines  $p$ ? **1 point**

☒

$$p_c = \neg d \wedge (a \vee b).$$

☐

$$p_c = \neg d \vee (a \vee b).$$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$$p_c = \neg d \wedge (a \vee b).$$

10) Which of the following sets represent the GACC pairs for clause  $a$ ? **1 point**

☐

The set  $\{5, 6\} \times \{13, 14\}$ .

☒

The set  $\{5, 6, 7\} \times \{13, 14, 15\}$ .

Yes, the answer is correct.

Score: 1

Accepted Answers:

*The set  $\{5, 6, 7\} \times \{13, 14, 15\}$ .*