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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=35&lesson=36)
- Logic: Basics
Needed for
Software
Testing (unit?
unit=35&lesson=37)
- Logic:
Coverage
Criteria (unit?
unit=35&lesson=38)

Assignment 5

The due date for submitting this assignment has passed.

Due on 2020-10-21, 23:59 IST.

Assignment submitted on 2020-10-14, 20:10 IST

1) State true or false: A clause is an expression that may or may not have logical connectives and also evaluates to a Boolean value. **1 point**

- ☐ True.
☒ False.

Yes, the answer is correct.
Score: 1

Accepted Answers:
False.

2) Which of the following represents correct subsumption order among logic coverage criteria? In the options below, read \rightarrow as "subsumes". **1 point**

- ☐ Combinatorial coverage \rightarrow General active clause coverage \rightarrow Predicate coverage.
☐ Predicate coverage \rightarrow Correlated active clause coverage.
☒ Combinatorial coverage \rightarrow Correlated active clause coverage \rightarrow Predicate coverage.
☐ General active clause coverage \rightarrow General inactive clause coverage

Yes, the answer is correct.
Score: 1

Accepted Answers:
Combinatorial coverage \rightarrow Correlated active clause coverage \rightarrow Predicate coverage.

The following eight questions are based on the logical predicate $p = a \vee (b \wedge c)$. Truth table for the predicate is given below with rows numbered. T represents the Boolean value true and F represents the Boolean value false.

● Coverage
Criteria,
Contd. (unit?
unit=35&lesson=39)

● Logic
Coverage
Criteria (unit?
unit=35&lesson=40)

○ Feedback for
week 5 (unit?
unit=35&lesson=41)

● Quiz:
Assignment 5
(assessment?
name=120)

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

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	a	b	c	p
1	T	T	T	T
2	T	T	F	T
3	T	F	T	T
4	T	F	F	T
5	F	T	T	T
6	F	T	F	F
7	F	F	T	F
8	F	F	F	F

Answer the following questions with reference to logical coverage criteria for this predicate and the given truth table.

3) Which of the following represents p_a , the conditions under which clause a determines p ? **1 point**

☐

$b \vee c$

☐

$b \wedge c$

☐

$\neg b \wedge \neg c$

☒

$\neg b \vee \neg c$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$\neg b \vee \neg c$

4) Which of the following represents p_b , the conditions under which clause b determines p ? **1 point**

☐

$a \vee c$

☐

$a \wedge c$

☒

$\neg a \wedge c$

☐

$\neg a \vee \neg c$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$\neg a \wedge c$

5) Which of the following represents p_c , the conditions under which clause c determines p ? **1 point**

☐

$a \vee b$

☐
 $a \wedge b$
☒
 $\neg a \wedge b$
☐
 $\neg a \vee \neg b$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$\neg a \wedge b$

6) Which of the following represents GACC pairs for clause a ? Note: Numbers below represent row numbers from the truth table. **1 point**

☒

$\{2, 3, 4\} \times \{6, 7, 8\}$

☐

$\{1, 3, 4\} \times \{5, 6, 7\}$

Yes, the answer is correct.

Score: 1

Accepted Answers:

$\{2, 3, 4\} \times \{6, 7, 8\}$

7) State true or false: There is only one GACC pair for clause b .

1 point

☒

True

☐

False

Yes, the answer is correct.

Score: 1

Accepted Answers:

True

8) State true or false: There is only one GACC pair for clause c and it is (5, 6).

1 point

☒

True

☐

False

Yes, the answer is correct.

Score: 1

Accepted Answers:

True

9) The set $\{(2, 6), (3, 7), (4, 8)\}$ is the set of RACC pairs for which clause?

1 point

☒

Clause a

☐

Clause b

☐

Clause c

Yes, the answer is correct.

Score: 1

Accepted Answers:

Clause a

10) State true or false: CACC pairs for clauses b and c are different from GACC pairs for these clauses **1 point**

☐ True

☒ False

Yes, the answer is correct.

Score: 1

Accepted Answers:

False