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

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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)

Week 5 : Assignment 5

Your last recorded submission was on 2022-08-31, 20:49 Due date: 2022-08-31, 23:59 IST. IST

1) State true or false: GACC subsumes predicate coverage.   **1 point**

  ○ True.
  ⦿ False.

2) When we test to check if a particular clause does not determine a predicate, which   **1 point**
kind of coverage criteria are we considering?

  ○ Active coverage criteria.
  ⦿ Inactive coverage criteria

3) Which of the following represents a correct order of subsumption amongst logic   **1 point**
coverage criteria? In the options below, read → as 'subsumes'.

  ○ Correlated active clause coverage → Predicate coverage → Clause coverage.
  ○ Combinatorial coverage → Predicate coverage → Clause coverage.
  ⦿ Combinatorial coverage → Correlated active clause coverage → Predicate coverage.
  ○ General active clause coverage → Correlated active clause coverage → Clause coverage.

Consider the logical predicate $p = a \lor (b \land c)$. Truth table for the predicate is given below with rows numbered from 1 to 8. T represents the Boolean value true and F represents the Boolean value false.

	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.

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

○ $b \wedge c.$

○ $b \vee c.$

◉ $\neg b \vee \neg c.$

○ $\neg b \wedge \neg c.$

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

○ $a \wedge c.$

○ $a \vee c.$

◉ $\neg a \wedge c.$

○ $\neg a \vee \neg c$

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

◉ $\neg a \wedge b.$

○ $\neg a \vee b.$

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

◉ $\{2, 3, 4\} \times \{6, 7, 8\}.$

○ $\{1, 3, 4\} \times \{5, 6, 7\}.$

8) State true or false: GACC pairs for clauses b and c are the same.   **1 point**

○ True.

⦿ False

9) The set $\{(2, 6), (3, 7), (4, 8)\}$ is the set of RACC pairs for which clause? **1 point**

⦿ Clause a.

◯ Clause b.

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

◯ True.

⦿ False

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers