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sneha18157@cse.ssn.edu.in ▾

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

- ☐ Lecture 15 - Data Flow Graph Coverage Criteria : Applied to Test Code (unit? unit=38&lesson=39)
- ☐ Lecture 16 - Software Design and Integration Testing (unit? unit=38&lesson=40)
- ☐ Lecture 17 - Design Integration

Week 4: Assignment 4

The due date for submitting this assignment has passed.

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

Assignment submitted on 2021-09-01, 22:05 IST

1) Which of the following is a graph model used for design integration testing?

1 point

- ☐ Control flow graph.
- ☐ Data flow graph.
- ☒ Call graph
- ☐ Design graph.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Call graph

2) In design integration, when a caller method m_1 calls a callee method m_2 , the variables from m_1 that are used in the call are called as

1 point

- ☒ Actual parameters.
- ☐ Formal parameters.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Actual parameters.

3) In design integration, when two methods make queries and updates to an external database, which coupling definition does it represent?

1 point

- ☐ Message passing coupling.
- ☐ Shared data coupling.

Testing and Graph Coverage (unit? unit=38&lesson=41)

Lecture 18 - Specification Testing and Graph Coverage (unit? unit=38&lesson=42)

Lecture 19 - Graph Coverage and Finite state Machines (unit? unit=38&lesson=43)

Week 4 Feedback Form: Software Testing (unit? unit=38&lesson=44)

Practice: Week 4: Assignment 4 (Non Graded) (assessment? name=113)

Quiz: Week 4: Assignment 4 (assessment? name=125)

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

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- ☐ Parameter coupling.
☒ External device coupling.

Yes, the answer is correct.
 Score: 1

Accepted Answers:
External device coupling.

4) A simple path from the last definition to the first use of a coupling variable is called **1 point** as

- ☐ A du-path.
☒ A coupling du-path.

Yes, the answer is correct.
 Score: 1

Accepted Answers:
A coupling du-path.

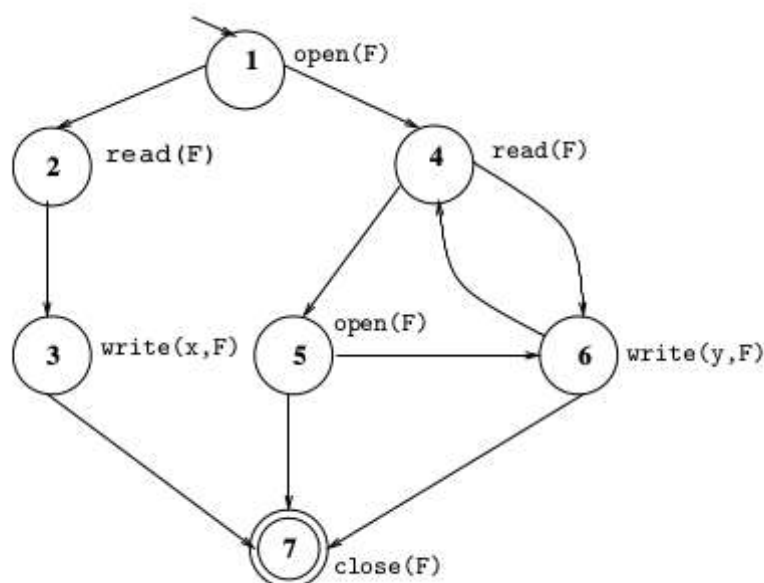
5) State true or false: Are control flow graphs representing code the same as finite state machines that represent the same code. **1 point**

- ☐ True.
☒ False.

Yes, the answer is correct.
 Score: 1

Accepted Answers:
False.

Consider the graph below that depicts the calls to file handler methods open(), close(), read() and write(). Any procedure/method that uses these methods has to satisfy the following sequencing constraints: (1) An open(f) must be executed before every write(t), (2) An open(f) must be executed before every close(), (3) A write(f) may not be executed after a close() unless there is an open(f) in between, (4) A write(t) should be executed before every close().



Answer the following questions with reference to the sequencing constraints and the graph a

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method that uses these constraints.

6) Which of the following is true with reference to the graph satisfying the sequencing constraints? **1 point**

- ☐ All the sequencing constraints are satisfied.
- ☐ Constraints (1) and (2) are satisfied but (3) and (4) are not.
- ☒ Constraints (1), (2) and (3) are satisfied but (4) is not.
- ☐ All constraints are violated.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Constraints (1), (2) and (3) are satisfied but (4) is not.

7) State true or false: The path (1,4,5,7) satisfies constraint (4). **1 point**

- ☐ True.
- ☒ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

False.

8) State true or false: The path (1,2,3,7) satisfies all the constraints. **1 point**

- ☒ True.
- ☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

9) State yes or no: Does the path (1,4,6,5,7) violate any of the constraints? **0 points**

- ☐ Yes.
- ☒ No.

Yes, the answer is correct.

Score: 0

Accepted Answers:

No.

10) State true or false: The path (1,4,6,4,6,5,7) satisfies all the constraints. **0 points**

- ☒ Yes.
- ☐ No.

Yes, the answer is correct.

Score: 0

Accepted Answers:

Yes.