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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Software Testing (course)Course
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☐ Week 6 -
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Week 7 : Assignment 7

The due date for submitting this assignment has passed.

Due on 2024-09-11, 23:59 IST.

Assignment submitted on 2024-09-11, 16:15 IST

1) Which of the following statements are true regarding input space partitioning applied **1 point** to the inputs of a particular software?

- ☐ Input space partitioning is a white-box testing technique that explores giving all possible inputs to the software for testing.
- ☐ Input space partitioning is a white-box testing technique that partitions the inputs according to the underlying code and passes inputs per partition for testing.
- ☐ Input space partitioning is a black-box testing technique that explores giving all possible inputs to the software for testing.
- ☒ Input space partitioning is a black-box testing technique that partitions the inputs according to the underlying requirements and passes inputs per partition for testing.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Input space partitioning is a black-box testing technique that partitions the inputs according to the underlying requirements and passes inputs per partition for testing.*2) If a particular partitioning of an input space does not meet the 'complete'ness **1 point** criterion, what could go wrong in the test cases? Identify the most accurate answer option.

- ☐ A partition that does not satisfy the completeness criterion is not well-defined and hence the test cases can be wrong.
- ☒ A partition that does not satisfy the completeness criterion might leave out certain kinds of inputs for testing, possibly resulting in missing some errors.
- ☐ A partition that does not satisfy the completeness criterion cannot be used for testing as it means that a tester does not know all the inputs.

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☐ Input Space Partitioning (unit? unit=59&lesson=62)

☐ Input Space Partitioning: Coverage Criteria (unit? unit=59&lesson=63)

☐ Input Space Partitioning Coverage Criteria: Example (unit? unit=59&lesson=64)

☐ Practice: Week 7: Assignment 7 (Non graded) (assessment? name=206)

☒ **Quiz: Week 7 : Assignment 7 (assessment? name=219)**

☐ Week 7 Feedback Form: Software Testing (IITB) (unit? unit=59&lesson=171)

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☐ A partition that does not satisfy the completeness criterion ceases to be a partition and hence cannot give good test cases.

Yes, the answer is correct.

Score: 1

Accepted Answers:

A partition that does not satisfy the completeness criterion might leave out certain kinds of inputs for testing, possibly resulting in missing some errors.

3) Which of the following is a list of functional testing techniques that work with inputs and requirements for defining test cases? **1 point**

- ☐ Decision tables, equivalence class partitioning, data flow testing.
- ☐ Equivalence class partitioning, data flow testing, boundary value analysis.
- ☒ Equivalence class partitioning, boundary value analysis, decision tables.
- ☐ Random testing, decision tables, input sets.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Equivalence class partitioning, boundary value analysis, decision tables.

4) Which of the following gives the most expressive and the least expressive coverage criterion for input space partitioning? **1 point**

- ☐ All combinations coverage is the most expressive and base choice coverage is the least expressive criterion.
- ☒ All combinations coverage is the most expressive and each choice coverage is the least expressive criterion.
- ☐ T-wise coverage (for large T) is the most expressive and pair-wise coverage is the least expressive criterion.
- ☐ Multiple base choice coverage is the most expressive and base choice coverage is the least expressive criterion.

Yes, the answer is correct.

Score: 1

Accepted Answers:

All combinations coverage is the most expressive and each choice coverage is the least expressive criterion.

5) State true or false: Equivalence class partitioning is the same as input space partitioning, with pair-wise coverage. **1 point**

- ☐ True.
- ☒ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

False.

For the next five questions, consider the input space as given below and answer the following questions.

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Characteristic	Block-1	Block-2	Block-3	Block-4
Annual-Income (in lakhs)	< 1.5	≥ 1.5 and < 3	≥ 3 and < 10	≥ 10
Age	< 18	≥ 18 and < 60	≥ 60	
Gender	Male	Female	Other	

6) How many input characteristics are there in the above table and how many blocks or partitions are there per input characteristic? **1 point**

- ☐ There are four input characteristics for the first input, three each for the second and the third inputs.
- ☐ There are three inputs and four blocks per input.
- ☒ There are three input characteristics and for the first input, there are four blocks, and three each for the second and third inputs.
- ☐ There are three input characteristics and totally four blocks per input.

Yes, the answer is correct.

Score: 1

Accepted Answers:

There are three input characteristics and for the first input, there are four blocks, and three each for the second and third inputs.

7) What is the minimum number of tests required to satisfy each choice coverage on the above table? **1 point**

- ☐ Three.
- ☒ Four.
- ☐ Nine.
- ☐ Thirty six.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Four.

8) What is the minimum number of tests required (considering same test case to cover more than one unique pair of values) to satisfy each pairwise coverage (PWC) criterion? **0 points**

- ☐ Four.
- ☒ Eight.
- ☐ Fifteen.
- ☐ Thirty six.

No, the answer is incorrect.

Score: 0

Accepted Answers:

Fifteen.

9) Suppose the base choice test is (annualIncome = 2 lakhs, age = 20, gender = 'MALE'). What is the minimum number of tests required (including the base choice test case) to satisfy each base choice coverage (BCC) criterion? **1 point**

- ☐ Four.

- ☒ Eight.
☐ Fifteen.
☐ Thirty six.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Eight.

10) State yes or no: Will the number of tests for all combinations coverage for this table **1 point** be more than the number of tests for base choice coverage, as above?

- ☒ Yes.
☐ No.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Yes.