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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

Week 6

Week 7

☐ Week 6 - Assignment Solving (unit? unit=49&lesson=50)

☒ Functional Testing (unit? unit=49&lesson=51)

☒ Input Space Partitioning

# Assignment 7

The due date for submitting this assignment has passed.

**Due on 2020-11-04, 23:59 IST.**

Assignment submitted on 2020-11-04, 21:53 IST

1) State true or false: In functional testing, decision tables handle multiple inputs by considering different combinations of equivalence classes, with conditions handling the combinations. **1 point**

☒ True.

☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

True.

2) In boundary value analysis, if the partition of inputs specifies an ordered set, which of the following best describes the guidelines to be used to choose test case inputs? **1 point**

☐ Construct test cases by specifying boundary points.

☐ Construct test cases at the boundary of each partition.

☐ Construct test cases by choosing minimum and maximum values.

☒ Construct test cases by choosing the first and the last elements of the set.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Construct test cases by choosing the first and the last elements of the set.

3) In equivalence class based testing, how does each partition help in testing? **1 point**

(unit?  
unit=49&lesson=52)

● Input Space  
Partitioning:  
Coverage  
Criteria (unit?  
unit=49&lesson=53)

● Input Space  
Partitioning  
Coverage  
Criteria:  
Example (unit?  
unit=49&lesson=54)

○ Feedback for  
week 7 (unit?  
unit=49&lesson=55)

● Quiz:  
Assignment 7  
(assessment?  
name=123)

Week 8

Week 9

Week 10

Week 11

Week 12

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- ☐ When the program under test is run on any input from each partition, it will produce the same output.
- ☒ Any input from each partition is good enough to test the program, it serves as a good source for selecting inputs.

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*When the program under test is run on any input from each partition, it will produce the same output.*

4) Which of the following is a formula for calculating the number of test cases for  $t$ -wise coverage? In the options below,  $n$  is the number of partitions and  $B_i$  is number of blocks for each partition. **1 point**

- ☐  $Max_{i=1}^n B_i.$
- ☒  $(Max_{i=1}^n B_i)^t.$

Yes, the answer is correct.  
Score: 1

Accepted Answers:

$(Max_{i=1}^n B_i)^t.$

5) Which of the following represents a correct order of subsumption among coverage criteria for input space partitioning? In the options below, read  $\rightarrow$  as "subsumes". **1 point**

- ☐ Pair-wise coverage  $\rightarrow$  Base choice coverage  $\rightarrow$  Each choice coverage.
- ☒ Multiple base choice coverage  $\rightarrow$  Base choice coverage  $\rightarrow$  Each choice coverage.
- ☐ Each choice coverage  $\rightarrow$  Base choice coverage  $\rightarrow$  All combinations coverage.
- ☐ All combinations coverage  $\rightarrow$  Base choice coverage  $\rightarrow$  Pair-wise coverage.

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*Multiple base choice coverage  $\rightarrow$  Base choice coverage  $\rightarrow$  Each choice coverage.*

6) State true or false: Pair-wise coverage and T-wise coverage criteria consider the functionality and interfaces while considering combinations. **1 point**

- ☐ True.
- ☒ False.

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*False.*

For the following four questions, consider a function called **NextDate** which takes as input a valid date in mm/dd/yyyy (month followed by date followed by year) format and computes the date of the next day. For example, given 06/14/1996, the **NextDate** function will return 06/15/1996 and when given 02/28/2019, the **NextDate** function will return 03/01/2019. Answer the following questions regarding input space partitioning test cases for the **NextDate** function.

7) What are the variables involved in the **NextDate** function input? **1 point**

- ☐ Month, day and year.

- ☒ Date containing month, day and year.  
☐ Today's date.  
☐ Range of dates.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Date containing month, day and year.*

8) Which of the following are valid partitions for day, as a part of the input to **NextDate** function?

**1 point**

- ☐ Only one partition:  $1 \leq \text{day} \leq 31$ .  
☐ Two partitions: (1)  $\text{day} > 1$  and (2)  $30 \leq \text{day} \leq 31$ .  
☐ Three partitions: (1)  $1 \leq \text{day} \leq 29$ , (2)  $\text{day} = 30$  and (3)  $\text{day} = 31$ .  
☒ Four partitions: (1)  $1 \leq \text{day} \leq 28$ , (2)  $\text{day} = 29$ , (3)  $\text{day} = 30$  and (4)  $\text{day} = 31$ .

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Four partitions: (1)  $1 \leq \text{day} \leq 28$ , (2)  $\text{day} = 29$ , (3)  $\text{day} = 30$  and (4)  $\text{day} = 31$ .*

9) State true or false: The partition

**1 point**

(1){month: month has 30 days}, (2){month: month has 31 days}, (3){month: month is February}

is a valid partition for month as a part of input to **NextDate** function?

- ☒ True.  
☐ False.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*True.*

10) Is the partition: { Year is a common year, Year is a leap year, Year is 2000 }, a valid partition for year as a part of the input to the **NextDate** function?

**1 point**

- ☒ Yes.  
☐ No.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Yes.*