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Correct answer

Question 1 3 / 3 pts

Which of the following testing technique is capable of generating test cases to test concurrency? (select all that apply)

- [ ] Boundary values
- [ ] Decision table
- [x] Petri-Net
- [ ] State Models (FSM)
- [ ] Equivalent Partitions

Wrong answer

Question 2 0 / 2 pts

If a Java program reads an age of a person and the valid range for ages are between 0 and 100 inclusive, which of the following has a correct boundary value for age in normal (general) scenario?

- [x] -1, 0, 1 54 99 100 101
- [ ] 0 54 10
- [ ] 0 1 54 99 100
- [ ] -1 0 1 99 100 101

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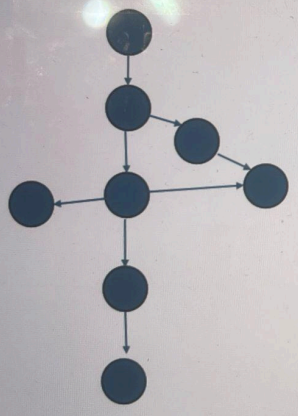
Wrong answer

Question 3 0 / 3 pts

How many independent paths are there in the following control flow graph?



- [x] 2
- [ ] 5

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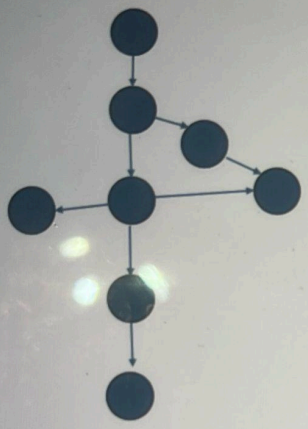

- 2
- 5
- 3
- 4
- 6
- 7

Correct answer

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Correct answer

Question 4 2 / 2 pts

Which of the following statement is true about the decision table technique?

- Decision table is a good technique to apply when inputs have clearly define ranges of values
- Decision table is a good technique to apply when inputs have constrains and dependencies in addition to input ranges
- Decision table is a good technique to apply when the output of the system depends on the previous input or timed activity
- Decision table can easily capture logic with selection and repetition

Correct answer

Question 5 2 / 2 pts

Which of the following is NOT true about exploratory testing?

- Exploratory testing is based on user perspective of the software usage
- Software specification or use-cases are not required to perform exploratory testing
- Software tester should have a good sense of the usage of software system under test to perform exploratory testing
- Since exploratory testing is about exploring how the software is written and then design test cases accordingly, code and the design documents are needed to perform exploratory testing

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Correct answer

Question 6 2 / 2 pts

Test cases derived from behavior of the system under test should be based on the.....

- dataflow diagram
- control flow graph
- ✔ state transition diagram
- boundary cases

Correct answer

Question 7 2 / 2 pts

Which of the following is NOT a factor that software testers use to design equivalent class based test cases?

- valid inputs
- invalid inputs
- ✔ Primary functions and Supporting Functions
- System configuration
- output

Correct answer

Question 8 2 / 2 pts

Strong normal equivalent partition testing required have test cases representing all the possible combinations of both valid and invalid partitions .....(T/F)

- True
- ✔ False

Correct answer

Question 9 3 / 3 pts

Which of the following is a major contributor of software bugs?

- Test cases
- Code
- Design
- ✔ Specification

Wrong answer

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Wrong answer

Question 10 0 / 2 pts

Software testing is a defect prevention technique .....(T/F)

- ✗ True
- → False

Question 11 6 / 10 pts

Suppose that a software system categorizes the daily water intake for a person based on their age and activity level. Age (in years) is divided into two categories (18 – 40) and (41 – 65), while activity level (in minutes per day) is divided into three categories (30 – 60), (61 – 120), and (121 – 180). Activity levels below 30 minutes and above 180 minutes are considered invalid, and ages below 18 and above 65 are also considered invalid for this program.

Also, suppose you are testing this software using equivalent partitioning, considering both valid and invalid partitions. Consider only integer values for age and activity level when deciding equivalent partitions.

Q1. How many equivalent partitions are there for age? 4

Q2. How many equivalent partitions are there for activity level? 4

Q3. How many test cases are needed for the strong normal scenario? 6

Q4. How many test cases are needed for the weak robust scenario? 16

Q5. Which of the following test cases cannot be part of the strong normal scenario (A, B, C, or D)? Here, the first input is age and the second input is the activity level D

A. (20, 40)

B.(46, 80)

C. (35, 150)

D. (55, 25)

Answer 1:

- ✓ 4

Answer 2:

- ✗ 4
- → 5

Answer 3:

- ✓ 6

Answer 4:

- ✗ 16
- → 7

Answer 5:

- ✓ D
- → d

Correct answer

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d

Correct answer

Question 12 3 / 3 pts

A software system enforces the following rules for usernames:

- A username must start with a lowercase letter.
- It can only contain lowercase letters, digits, and the underscore.
- The length must be between 5 and 15 characters (inclusive).

You are testing this system using equivalence partitioning.

Which of the following statements is true regarding the valid and invalid partitions for usernames? Select the best matching answer

- ✔ Usernames shorter than 5 characters form a separate invalid partition.
- A username of exactly 15 characters belongs to an invalid partition.
- The partition containing valid usernames includes names that start with both uppercase and lowercase letters.
- A username starting with a digit is in the same partition as one starting with an uppercase letter.

Question 13 1.5 / 3 pts

A banking software system has the following constraints for login names:

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The partition containing valid usernames includes names that start with both uppercase and lowercase letters.

A username starting with a digit is in the same partition as one starting with an uppercase letter.

Question 13 1.5 / 3 pts

A banking software system has the following constraints for login names:

The login name must be between 8 and 12 characters long (inclusive).
It can only contain uppercase letters, lowercase letters, and digits.

Which of the following test cases correctly apply boundary value analysis based on login name length? Consider the normal boundary value testing scenario (Select all that apply)

- ✔ ☑ A login name with 8 characters
- ✔ ☑ A login name with 9 characters
- ✘ ☑ A login name with 7 characters
- ✔ ☑ A login name with 11 characters
- ✔ ☑ A login name with 12 characters
- ✘ ☑ A login name with 13 characters

Correct answer

Question 14 2 / 2 pts

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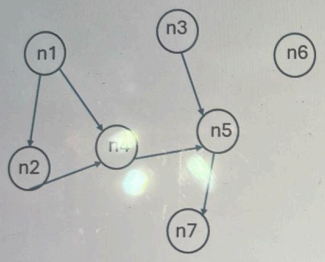
Question 14 2 / 2 pts



Which of the following nodes are sink nodes (select all that apply)?

- [ ] n1
- [ ] n2
- [ ] n3
- [ ] n4
- [ ] n5
- [x] n6
- [x] n7

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Question 15

9 / 9 pts

```
public static int countW(int a[])
{
  int count=0;
  int i =0;
  while (i < a.length)
  {
        if (a[i]%2 == 0)
        {
          coun.  count +1;
        }
     i++;
  }
  return count;
}
```

1. What is the cyclomatic complexity (# of independent paths) of this code? Use the node labeling given in the problem to draw the control flow graph

A) 3 B) 4 C) 6 D) 7

2. Which of the following test data for the path 1.2.3.4.6.3.7

A) a= {1, 2} B) a= {2} C) { } D) {3}

3. Which of the following test data for the path 1.2.3.7

A) a= {1} B) a= {0} C) { } D) {-1}

Answer for question 1 (select A, B, C, or D)? A

Answer for question 2 (select A, B, C, or D)? D

Answer for question 3 (select A, B, C, or D)? C

Answer 1:

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Answer for question 1 (select A, B, C, or D)? A

Answer for question 2 (select A, B, C, or D)? D

Answer for question 3 (sele A, B, C, or D)? C

Answer 1:

- A
- a
- 3

Answer 2:

- D
- d

Answer 3:

- C
- c

Quiz Score: **37.5** out of 50