

## Unit 5 - Week 3

## Course outline

How does an NPTEL online course work?

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Week 2

Week 3

● Lecture 11: MC/DC Testing - Part 1

● Lecture 12: MC/DC Testing - Part 2

● Lecture 13: Path Testing

○ Lecture 14: Dataflow and Mutation Testing

● Lecture 15: Mutation Testing

○ Quiz : Week 3 Assignment 3

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## Week 3 Assignment 3

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

Due on 2020-02-19, 23:59 IST.

- 1) Which one of the following is a measure of the testing difficulty of a program?
- Number of statements in the program
  - Number of decision statements in the program
  - Complexity of the arithmetic expressions used in the program
  - Time complexity of the program

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:

b.

1 point

- 2) Which one of the following subsumption relations is incorrect?
- Multiple condition coverage subsumes decision coverage
  - Basic condition coverage subsumes decision coverage
  - Basic condition coverage subsumes statement coverage
  - Modified Condition/ Decision Coverage (MC/DC) subsumes basic condition coverage

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:

b.

1 point

Questions 3 to 7 are based on the following "C" code segment.

```
int main () {
    int a, b=0;

    scanf("%d", &a);

    if( a < 10 || a>100) {
        b=b+10;
    }
    if( a == 20 ){
        b=b+20;
    }
    if( a == 30 ){
        b=b+30;
    }
    else{
        b=b+40;
    }
}
```

- 3) At least how many test cases are needed for achieving decision coverage on the given C code?
- 3
  - 4
  - 5
  - 6

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

a)

1 point

- 4) At least how many test cases are needed for the given C code for achieving basic condition coverage?
- 3
  - 4
  - 5
  - 6

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

b)

1 point

- 5) At least how many test cases are needed for the given C code for achieving multiple condition coverage?
- 4
  - 6
  - 8
  - Multiple condition coverage is not achievable for the given code

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

d)

1 point

- 6) At least how many test cases are needed for the given C code for achieving MC/DC coverage?
- 3
  - 4
  - 5
  - MC/DC coverage is not achievable for the given code

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

b)

1 point

- 7) At least how many test cases are needed for the given C code for achieving basis path coverage?
- 4
  - 6
  - 8
  - Basis path coverage is not achievable for the given code

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

a)

1 point

- 8) If two code segments have Cyclomatic complexities of N1 and N2 respectively, what will be the Cyclomatic complexity of the juxtaposition of the two code segments?
- N1+N2
  - N1+N2+1
  - N1+N2-1
  - N1\*N2

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

c)

1 point

- 9) At least how many test cases are required to achieve condition/decision coverage of the following code segment:
- ```
If((a>5) and (b<100) and (c>50)) x=x+1;
```
- 1
  - 2
  - 3
  - 4

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

b)

1 point

- 10) At least how many test cases are required to achieve multiple condition coverage of the following code segment:
- ```
If((a>5) and (b<100) and (c>50)) x=x+1;
```
- 2
  - 4
  - 6
  - 8

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0

Accepted Answers:

d)

1 point