Q1. Which of the subsumption hierarchies is correct? (Where “>” means “subsumes")

A Path > Branch > Statement

B Statement > Branch > Path

C Node > Edge > Path

D Path > Block > Decision

Q2. Which of the following statements are false?

1. Covering all the paths in a program is not sensible when there are unbounded loops

2. Branches comprise of all the edges in a CFG

3. The nodes of a CFG correspond to individual program statements

4. A test suite that covers all the branches of a program will also cover all of its statements

A 2 and 3 only

B 1 and 4 only

C 2 only

D 1 only

Q3. Which of the following statements are true?

1. Covering 100% of a program will reveal all bugs

2. A coverage criterion A subsumes a coverage criterion B if by achieving 100% coverage of A, we have achieved 100% coverage of B

3. Black-box coverage criteria examine the internal structure of a piece of software to devise test requirements

4. A test requirement is the same thing as a test case

A All of them

B 1, 3, and 4 only

C 2 only

D 4 only

Q4. Which of the following statements are true?

1. 50% Statement Coverage is better than 25% Branch Coverage

2. Coverage Level is the percentage of the number of test requirements of a coverage criterion that a test suite fulfils

3. An infeasible test requirement is when there is no test case that could be written to fulfil the test requirement

4. Coverage Level is the percentage of bugs a test suite finds in a program

A 1, 2 and 3 only

B 1, 2, and 4 only

C 2 and 4 only

D 2 and 3 only

Q5. In the following program, CFG node labels appear in comments, like this /* A*/

```
public int fib(int count) {
    int num1 = 0;
    int num2 = 1;

    for (int i = 1 /* A */; i <= count /* B */ ; ++i /* X */) {
        int sumOfPrevTwo = num1 + num2; /* C */
        num1 = num2;
        num2 = sumOfPrevTwo;
    }

    return num2; /* D */
}
```

Where does the edge from node X go to?

A Node A

B Node B

C Node C

D Node D