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

A All Def-Use Path > All Uses > All Defs

B MCDC > Branch > Statement

C Multiple Condition > MCDC > Condition

D All Def-Use Path > Path > Branch

Q2. Which of the following criteria would result in the most test requirements for the following predicate?

```
(a > b) && (c != d || e > f) && (!g)
```

A Multiple Condition

B MCDC

C Branch

D Condition Decision

Q3. Which of the following statements are true?

1. Condition Decision Coverage subsumes Branch Coverage
2. Condition Decision Coverage subsumes Condition Coverage
3. With Correlated MCDC, the truth values of the minor conditions are fixed
4. With MCDC, the truth value of the major condition flips with the branch predicate

A 1, 2 and 4 only

B 1, 2, and 3 only

C 2, 3, and 4 only

D All of them

Q4. In the following table, the two rows are two test requirements for **Correlated MCDC**. Each column represents a condition, except the final column, which corresponds to the truth value of the branch predicate. For the two test requirements, which condition(s) could qualify as the major condition?

	Condition 1	Condition 2	Condition 3	Condition 4	Branch Predicate
1	T	F	T	F	F
2	F	F	F	T	T

A 1 and 3 only

B 4 only

C 1, 3, and 4 only

D None of them

Q5. In the following table, the two rows are two test requirements for Restricted MCDC. Each column represents a condition, except the final column, which corresponds to the truth value of the branch predicate. For the two test requirements, which condition(s) could qualify as the major condition?

	Condition 1	Condition 2	Condition 3	Condition 4	Branch Predicate
1	T	F	T	F	F
2	F	F	T	F	T

A 1 only

B 1 and 3 only

C 2 and 4 only

D None of them

Q6. For the method someMethod, which of the following statements are true?

CFG Node

```
1  public int someMethod(int y) {
2     int x = 0;
3     if (y > 0) {
4        x ++;
5     }
6     System.out.println(x);
7     return x;
8  }
```

1. Node 1 is a use
2. Node 4 is a use
3. The path 2 → 3 → 6 is definition clear with respect to x
4. 1 → 2 → 3 is a definition-use path

A 2, 3, and 4 only

B 2 and 4 only

C 1 and 3 only

D All of them

Q7. For the method someMethod, which of the following statements are false?

```
CFG Node
1  public int someMethod(int y) {
2     int x = 0;
3     if (y > 0) {
4        x ++;
5     }
6     System.out.println(x);
7     return x;
8  }
```

1. Node 4 kills the definition of x assigned at node 2
2. Node 3 kills the definition of y assigned at node 1
3. defs(4) = uses (4)
4. defs(4) = uses(6)

A 1 and 4 only

B 2 only

C 1, 3, and 4 only

D All of them

Q8. For the method anotherMethod, and the paths:

1. 2 → 3 → 4 → 6 → 7 → 8 → 9
2. 2 → 3 → 4 → 5
3. 3 → 4 → 5 → 8 → 9
4. 3 → 4 → 8 → 9

```
CFG Node
   1  public int anotherMethod(int a) {
   2      int r = a + 1;
   3      int s = a - 1;
   4      if (a == 0) {
   5          r = 2;
   6      } else if (a == 1) {
   7          s = r;
   8      }
   9      return r * s;
  10  }
```

Which of the following statements is the odd one out?

A All Defs coverage includes one of paths 1 and 2 but not both

B All Uses Coverage includes both paths 1 and 2

C All Uses Coverage includes both paths 3 and 4

D All Def-Use Paths Coverages includes paths 1 and 2