CS 4501/6501: Quiz 10

7-Nov-2017

Names:

Instruction: Answer the questions as concisely as you can. Please write neatly; if I can't read it I have to mark it wrong.

Consider the following predicate, along with the following test inputs:

```
p = abc + !a!b!c
In Java, p = (a && b && c)  ||  (!a && !b && !c)
```

	a	b	c	p	p_a	p_b	p_c
t1	T	T	T				
t2	T	T	F				
t3	T	F	T				
t4	T	F	F				
t5	F	T	T				
t6	F	T	F				
t7	F	F	T				
t8	F	F	F				

1. (4 pts.) Complete the truth table and compute the determination. Fill in the missing columns in the given table (you should fill in the above table directly). No steps need be shown - only the result is graded.

   Answer: The filled in table is:

```
       a   b   c    p    p_a   p_b   p_c
t1   | T | T | T |  T  |  T  |  T  |  T  |
t2   | T | T | F |     |     |     |  T  |
t3   | T | F | T |     |     |  T  |     |
t4   | T | F | F |     |  T  |     |     |

t5   | F | T | T |     |  T  |     |     |
t6   | F | T | F |     |     |  T  |     |
t7   | F | F | T |     |     |     |  T  |
t8   | F | F | F |  T  |  T  |  T  |  T  |
```

2. (3 pts.) Identify all pairs of test inputs that satisfy General Active Clause Coverage (GACC) with respect to variable each clause a, b, and c. Use the labels 1 through 8 to identify tests.

```
Answer:
    GACC for a:  (1,5), (1,8),
                 (4,5), (4,8)
    GACC for b:  (1,3), (1,8),
                 (6,3), (6,8)
    GACC for c:  (1,2), (1,8),
                 (7,2), (7,8)
```

3. (4 pts.) Identify all pairs of test inputs that satisfy General Inactive Clause Coverage (GICC) with respect to variable each clause a, b, and c. Identify any infeasible test requirements. Use the labels 1 through 8 to identify tests.

```
Answer:
     GICC for a: P = T: no feasible pairs
                 P = F: (2,6), (2,7),
                        (3,6), (3,7)
```

```
GICC for b: P = T: no feasible pairs
            P = F: (2,4), (2,7),
                   (5,4), (5,7)
GICC for c: P = T: no feasible pairs
            P = F: (3,4), (3,6),
                   (5,4), (5,6)
```