

Quiz 2: October 7, 2021

Name: Solution

Student ID: _____

The questions below start with the formula $f(a, b, c) = (\neg a \wedge \neg b) \vee (a \wedge c)$

1. (4 points) Give us the truth table for $f(a, b, c)$.

a	b	c	$f(a, b, c)$
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

2. (6 points) Give us the Disjunctive Normal Form (DNF—also known as Sum of Products SOP) for $f(a, b, c)$

$$(\neg a \wedge \neg b \wedge \neg c) \vee (\neg a \wedge \neg b \wedge c) \vee (a \wedge \neg b \wedge c) \vee (a \wedge b \wedge c)$$