

Student Honor Pledge:

All work submitted is completed by me directly without the use of any unauthorized resources or assistance
 Initials: _____

Quiz 2

(October 12th @ 5:30 pm)

PROBLEM 1 (40 PTS)

- Complete the following table:

| REPRESENTATION | | | |
|----------------|--------------------|----------------|----------------|
| Decimal | Sign-and-magnitude | 1's complement | 2's complement |
| | | 1111 | |
| | | 01000 | |
| | 010111 | | |
| -10 | | | |

- Convert the following decimal number to its 2's complement representation: -10.25 (5 pts)

PROBLEM 2 (20 PTS)

- Perform the following operation in the 2's complement system, i.e., provide the summands and the result in 2's complement representation (indicate the carries). Use the minimum number of bits to represent both the summands and the result so that the overflow bit is 0.
 ✓ -17 + 10

PROBLEM 3 (40 PTS)

- Complete the timing diagram of the circuit shown below: $y = y_3y_2y_1y_0$, $x = x_1x_0$

