

Introduction to Computer Science – CMPS 101
Quiz-3 = 5 Points
December 16, 2014 - SOLUTION

Name:

ID:

Signature:

Problem-1- (5 Points):

Q₁: The binary number corresponding to the decimal number **53** is: (1Pt)

1. **00110101**
2. **10110101**
3. **11110101**
4. **10000001**
5. **11111111**

Q₂: To add the following two binary numbers 10110001 and 10001111 we may use. (1Pt)

1. **Eight 1-bit Full Adder**
2. Four Decoder and Four Multiplexer.
3. One full adder and seven decoder.
4. Two 8-bit decoder.
5. One Decoder, One Multiplexer and One Full Adder.

Q₃: We can build all the logic circuits of the computer by: (1Pt)

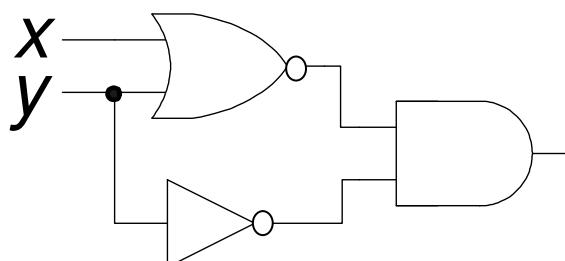
1. **AND, OR, NOT gates.**
2. VNOR and XBOR gates.
3. RAM and ROM gates.
4. NAND, MAND and SAND gates.
5. None of the above.

Q₄: Find the logic function o of the following truth table. (1Pt)

x	y	o
0	0	1
0	1	1
1	0	0
1	1	0

$$o = x'y' + x'y$$

Q₅: What is the output of the following logic circuit. (1Pt)



$$o = (x+y)' \cdot y'$$