Assignment 1
CIS 335
Due Date: Sunday, February 2, 2020

Show all steps.
Full Marks = 25 points

1. What is the decimal representation of each of the following unsigned binary integers?
a. 11111000
b. 11001010
c. 11110000

2. What is the sum of each pair of binary integers?
a. 00001111, 00000010
b. 11010101, 01101011
c. 00001111, 00001111

3. How many bits are contained in each of the following data types?
a. word
b. doubleword
c. quadword

4. What is the minimum number of binary bits needed to represent each of the following unsigned decimal integers?
a. 65
b. 256
c. 32768

5. What is the hexadecimal representation of each of the following binary numbers?
a. 1100 1111 0101 0111
b. 0101 1100 1010 1101
c. 1001 0011 1110 1011

6. What is the binary representation of the following hexadecimal numbers?
a. E5B6AED7
b. B697C7A1
c. 234B6D92

7. What is the unsigned decimal representation of each hexadecimal integer?
a. 3A
b. 1BF
c. 4096

8. What is the 16-bit hexadecimal representation of each signed decimal integer?
a. - 32
b. - 62

9. What is the decimal representation of the following signed binary numbers?
a. 10110101
b. 00101010
c. 11110000

10. What is the 8-bit binary (two's-complement) representation of each of the following signed decimal integers?
a. - 5
b. - 36

c. - 16

11. Create a truth table to show all possible inputs and outputs for the boolean function described by (¬A ∧ ¬B).

12. If a boolean function has four inputs, how many rows are required for its truth table?