CSE112-CO Quiz #1 (First Month Evaluation)

This Quiz is worth 5%. Scoring is shown for 100. [For ease of grading] Each question is worth 10 points. Alloted time: 15 minutes. Starts at 11:10AM ends at 11:25AM. Jan 30, 2020. The quiz will be shown on screen. Hand-write your answers on your own paper. At the end of the time slot, hand over your answers to us. Just saying True/False is not enough. You must explain/defend your answer.

1. A byte value can always be written as two hexadecimal digits. True/False? Explain.
2. For each of the following, guess what radix (also called base) the number is written in.
   (a) 1110 Could this be in binary? If so, what is the hexadecimal equivalent?
   (b) 1110 Could this be in octal? If so, what is the binary equivalent?
   (c) 8a89 Could this be in octal? Perhaps hexadecimal? If so, what is the binary equivalent?
3. Some decimal integers cannot be written as hexadecimal numbers. And, vice versa? True/False? Explain.
4. Give the ones complement of 0x6b4004a9.
5. We wish to store the number 2^{32} - 5. How many bytes will the number need for it to be stored? Suppose we start storing at location 0x3fffeb92. What will this byte contain? What are the addresses of other bytes?
6. What is the difference between registers and memory locations.
7. Explain the Fetch-Decode-Execute cycle of a processor (CPU).
8. What is a macro? Give an example.
9. Compare the functionality of Control Unit with ALU.
10. Name three CPUs/GPUs that are in use these days (2015+).