

## In-Class Assignment (Number Systems)

Name \_\_\_\_\_

SID (last 4 digits only) \_\_\_\_\_

**DIRECTIONS: Complete each problem as described.****IMPORTANT: For full credit, show your work for all problems (this will be worth 50% of your grade) on the back of each page; do not use calculators. Attach additional pages as needed; please label work clearly indicating your name and the assignment number.**1. Convert the following **binary (base 2)** numbers to **decimal (base 10)** values.a.  $(10110111)_2$  ANSWER: \_\_\_\_\_b.  $(01100110)_2$  ANSWER: \_\_\_\_\_2. Convert the following **decimal (base 10)** numbers to **binary (base 2)** values.a.  $(207)_{10}$  ANSWER: \_\_\_\_\_b.  $(135)_{10}$  ANSWER: \_\_\_\_\_3. Convert the following **hexadecimal (base 16)** numbers to **binary (base 2)** values.a.  $(2D7)_{16}$  ANSWER: \_\_\_\_\_b.  $(AC95)_{16}$  ANSWER: \_\_\_\_\_

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4. Convert the following **binary (base 2)** numbers to **hexadecimal (base 16)** values.

a.  $(0101011010)_2$  ANSWER: \_\_\_\_\_

b.  $(10110011)_2$  ANSWER: \_\_\_\_\_

5. Convert the following **decimal (base 10)** numbers to **hexadecimal (base 16)**.

a.  $(2519)_{10}$  ANSWER: \_\_\_\_\_

b.  $(247)_{10}$  ANSWER: \_\_\_\_\_

6. Convert the following **hexadecimal (base 16)** numbers to **decimal (base 10)**.

a.  $(1C3E)_{16}$  ANSWER: \_\_\_\_\_

b.  $(7A4)_{16}$  ANSWER: \_\_\_\_\_

**Grading Criteria**

You start with 100 points and then lose points according to the following criteria:

1. There is no answer nor work shown for the question: -8 points
2. Answer is incorrect, work is correct: -2 points
3. Answer is correct, work is incorrect: -4 points
4. Answer is incorrect, work is incorrect: -5 points
5. Answer is correct, no work: -6 points