

**DUE:** Monday 01/28/19 at the end of the class.

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. Perform the following **binary** additions and subtractions.

a.  $101101 + 11001$  ANSWER: \_\_\_\_\_

b.  $10101100 + 110111$  ANSWER: \_\_\_\_\_

c.  $101101 - 11001$  ANSWER: \_\_\_\_\_

d.  $10101100 - 110111$  ANSWER: \_\_\_\_\_

2. Perform the following **hexadecimal** additions and subtractions. Keep the answer in hexadecimal, *i.e.*, do NOT convert to another base to solve the problem.

a.  $B58 + 3DA$  ANSWER: \_\_\_\_\_

b.  $5E + 2F$  ANSWER: \_\_\_\_\_

c.  $B58 - 3DA$  ANSWER: \_\_\_\_\_

d.  $5E - 2F$  ANSWER: \_\_\_\_\_

**Note:** Once you have performed all the additions and subtractions in their corresponding bases you may want to convert the operands and the results to base 10 to check if your results are correct.

### **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: -12 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