UNIVERSITY OF MASSACHUSETTS LOWELL
Department of Continuing Engineering

90.267 **C Programming** **Homework #6**

Each question below is worth 5 points. The maximum score for this homework is 40.

1. Write the following 16-bit binary number in hexadecimal. Show your work to receive credit.

   0110110010100101

2. Write the following hexadecimal number in 16-bit binary. Show your work to receive credit.

   0xF34B

3. Write the following hexadecimal number in decimal (base 10). Show your work to receive credit.

   0x12AD

4. Write the following octal number in decimal (base 10). Show your work to receive credit.

   02370

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5. Write the following decimal number in 8-bit binary.
Show your work to receive credit.

107

6. Write the following decimal number in 8-bit binary.
Note: Use 2's complement method to solve this.
Show your work to receive credit.

-107

7. Write the following 8-bit binary number in decimal.
Note: Use 2's complement method to solve this.
Show your work to receive credit.

10110110

8. Add the following 16-bit binary numbers.

```
  1 0 1 1 0 1 1 0 1 0 0 1 0 1 0 1
+ 0 0 1 1 0 0 0 1 1 0 1 0 0 1 0 0
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```