UNIFIED ENGINEERING Fall 2003

I. Kristina Lundqvist

Problem C6. (Unified Computers and programming)

1. What is the excess-16 representation of 12? How many bits do you need to represent a number in excess-16 format?

2. Convert 29/8 into binary 8-bit floating-point representation.

3. Sketch the basic von Neumann architecture and describe each component in a few lines.

4. Write an assembly language program (using the language described in the machine language handout) to add two positive numbers. Assume that the numbers are present in memory locations 0xFE and 0xFF. Turn in both a hard copy and an electronic copy of your code.