

**UNCC, Department of Electrical and Computer Engineering  
ECGR4101/5101, Fall 2005, Homework #2 Solution (20 points)**

0. How long did this homework take you?

1. Read the Jim Turley article “The Two Percent Solution.” Mr. Turley believes processors make up only a small percentage of semiconductor volume yet generate most of the revenue. In four lines of correct English, state why you agree or disagree with him. (4 points)

2. Read the Jim Turley article “The Death of ASICs.” Mr. Turley believes the days of custom logic are numbered. In four lines of correct English, state why you agree or disagree with him. (4 points)

3. I have an LED whose average current drain is 4mA at 3v. I am using 250 mAH 1.5v cells as the power supply for this LED. If I want my LED to power on for 150 hours continuously, how many cells do I need and in what configuration (i.e. how do I connect them)? (2 points) **Need 6 cells (3 parallel series of two).**

4. For the SKP board, what is the maximum addressable memory size? Can you, the user, store a value at memory location 0FFF5h? Why or why not? (2 points)

**Addressable memory is up to FFFFFh=1 Mb. Data can be stored at 0FFF5 since it is an EEPROM.**

5. Assume that the memory/register contents are as shown. Show the contents of the listed registers after ALL of the following instructions are executed. (8 points)

**FB=0900**

**R0=1211**

**R1=7825**

**R2=1413**