

UNCC, Department of Electrical and Computer Engineering
ECGR4101/5101, Fall 2007, Homework #2, Due: 9/10/07, at the beginning of class (20 points)

0. How long did this homework take you? (1 point)

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. (3 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. (3 points)

3. I have an LED whose average current drain is 3mA at 5.0v. I am using 250 mAhr 1.5v cells as the power supply for this LED. If I want my LED to powered on for 3 weeks continuously, how many cells do I need and in what configuration (i.e. how do I connect them)? (3 points)

4. For the SKP board, what is the total amount of memory that can be used by a *user* for storing data? Can you, the user, store a value at memory location 100F5h? Why or why not? (2 points)

5. Write a small subroutine in C code that: (6 points)
 - Has no input variable and passes out no return variable.
 - Loads the global integer array *array[100]*. Load each *ith* element of array (*array[i]*) with the value of *i*GlobalConstant*, where *GlobalConstant* is an integer.Remember to:
 - Define ALL variables and define them correctly.
 - Ensure the C code is written correctly.
 - Where appropriate, define constants with a macro (#define).

6. For each variable of the program above, identify which section of memory the part will be mapped. (2 points)