**UNC Charlotte, Department of Electrical and Computer Engineering**
**ECGR 4101/5101, Fall 2005, Homework #5, Due: 10/7/05, at the beginning of class (20 points)**
**Turn in hard copy in class AND send assignment (MS Word doc or text) to jmconrad@uncc.edu**

It should be obvious, but you may NOT use questions based on questions from previous tests or that have been submitted by other students!!!

Write four multiple-choice questions suitable for the midterm exam.  The requirements are:
1.  They must be typed.
2.  There must be five choices for answers.
3.  Only one answer should be possible.  Identify the answer by "**bolding**" it.
4.  Ensure the questions and answer-choices are clear.

The scoring for each question will be:
  1 point:  Clear question, from material covered since the start of semester
  1 point:  Clear and reasonable answer-choices, answer correct and **bolded**
  1 point:  Quality of question and answer-choices (spelling, grammar, adherence to class material)
  1 point:  Likelihood it will be selected for the final exam
  1 point:  Difficulty of question (determined by Dr. Conrad)

Hints:
  • You can include C code listing, and ask several questions related to the code listing.
  • You can provide several supporting lines or identify a problem, and then ask several questions related to the problem you set up.
  • ENSURE there is only one correct answer.

Examples:

1) Which of the following fully describes the outcome of the code at the right?
   a.  Add all the numbers from 0 to 100 and put the result in sum.
   b.  Add all the odd numbers from 0 to 100 and put the result in sum.
   c.  Add all the even numbers from 0 to 100 and put the result in sum.
   d.  Add all the odd numbers from N to 100 and put the result in sum.
   **e.  Add all the even numbers from N to 100 and put the result in sum.**

```
int i,sum;
sum = 0;
i = 0;

for(i=N;i<=100;i++){
  if(!(i % 2))
    sum += i;
}
```

2) A battery that is rated at 1200 mAhr is attached to a device that draws 125mA in active mode and 5mA in sleep mode. The device is in sleep mode for 50 min of every hour and in active mode for 10 min of every hour.  How long will the battery last?
   a.  240.00 Hours
   **b.  48.00 Hours**
   c.  40.00 Hours
   d.  9.60  Hours
   e.  9.23 Hours