ECE 331 Digital System Design Student:_____
Fall 2007 Nathalia Peixoto

HOMEWORK 1 – due Thursday, January 31st at 4:30pm

Obs. Ways to turn this assignment in:

- Delivered (printed, not emailed) to room 211 of STII before 3:30pm of the due date.
- Delivered (printed) at the beginning of class.
- Delivered up to 24h after the due date: to receive credit for 80% of your grade.
- Delivered until 48h after it's due: to receive credit for 60% of your grade.

A) Questions on the paper: Nature, vol. 442, 07/13/2006, pg 164-171.

A.1. (10) Describe in one paragraph the main point of the paper.

A.2. (10) Cite three words or concepts you learned or had to look up: (no need to describe them, just copy the words or expressions from the paper!): _____, _____, _____.

A.3. (20) Cite at least one (max of three) technical problem you spotted with this design.

A.4. (20) You are the project manager of the Braingate™. Your objective is to make as much money as you can. What is your next step? (Describe the next step, cite problems, and solutions to those.) You currently have some money available (say $100k).

A.5. (20) You are the project manager of the Braingate™. Your objective is to get a Nobel Prize. What is your next step? (Describe the next step, cite problems, and solutions to those.) You currently have some money available (say $100k).

A.6. (20) Now you are a mere (!) engineer. Your boss, the project manager, tells you that the next time your team implants somebody you will target a 10 year trial. What's your response? (It has to be positive, but you need to address main issues/concerns with that).

B) ECE590-only (499 are welcome to try these, they will count as extra-credit).

B.1) (15) Scan the Research Highlights, In the News, and In Brief sections from Nature Reviews in Neuroscience, February 2008 Vol 9 No 2 (pg 78 through 85 only).

Cite the title of your chosen article, and write one paragraph summarizing it (there's no need to reference external sources). I hope to see a brief description of the article, and your own ideas of why it is a good one, what is interesting (or boring?) about the particular subject.

B.2) (15) Find at least two books which are not available at the GMU libraries. Reference them below, create a worldcat list (www.worldcat.org), and email it to me (the link to your list). The books you are looking for have to deal with a subject we will talk about in this course, Neural Engineering. *(tip: look at the chapters of the book: they give a good idea of what we will cover.*)

B.3) (20) Write a one paragraph summary of the *Vision Series* talk on Monday 1/28, 8pm (by Dr Lynn Gerber, MD, "**Foiling Fatigue**" – Center for the Arts – it's free.).

Totals: 590: 150 points. 499: 100 points.