Student Id: _____ Name: _____

CS 352: Usability Engineering
Dr. Burnett
Winter 2010
Midterm Exam -- Sample Answers

1. (Process) 18 points. Each letter of PRICPS describes part of the process we have been following throughout the course.
a. Describe *each step* of the process up to the "S". (You may ignore the "S".) About 1 sentence for each letter is expected.
b. What does each step deliver to the *next step*? (For example, what is the connection between what you do in "C" to what happens in the second "P"?)
c. Provide a very brief *example* illustrating each step named in part a. (1 sentence each).

a, b (Summary):
Preconceptions: what we know, what we don't know. Delivers questions we need to look into to R.
Research: trying to find answers we need, eg with user studies. Delivers answers to I.
Insights: getting insights about our design from the research we did. Delivers Insights to C.
Concepts: brainstorming ways to go about things in our prototype. Delivers design Concepts to P.
Prototypes: screens and workflows. They start in sketch form (lo-fi) and eventually proceed to something executable (hi-fi). Delivers Prototypes.

2. (Design guidelines) 6 points. Example: Suppose in a UI, you have just dragged a folder to make a copy of its contents. An animation appears on the screen, showing files moving from one folder to another.
Which of the following is illustrated by this example?
a. visibility

b. mapping
c. an affordance
d. feedback

D, feedback.

3. (Cognition): 12 points.

a. Briefly describe (or sketch if you want) one *example* of something a UI can do that will help people use it better, due to some characteristic of human memory. About 1 sentence.
b. Say *what characteristic* of human memory you are referring to, and *how* the UI example in part a is taking advantage of this aspect. About 2 sentences.

a, b. (Summary) Make it a GUI instead of a command line. Humans are better at recognition than at recall.

4. (Perception): 12 points.
a. *Sketch one example* of a portion of a UI that is consistent with a characteristic of the human visual system.
b. Say *what characteristic* of the human visual system you are referring to, and *how* the UI example in part a is consistent with this aspect. About 2 sentences.

Example (Summary): This could have been good contrast (contrasting colors, contrasting saturation and light vs dark).

5. (Interviews). 20 points. Here are some interview questions. Assume that the research goal of this interview is:

Interview goal: to learn the student participant's interest in power usage.

a. List a strength or weakness of each question, (accordance with the characteristics we have discussed about how to design interviews).

b. Say whether the question could be in a structured, unstructured, and/or semi-structured interview.

	Question's Strength or Weakness (and label S or W).	Could be in which type(s) of interview (structured, unstructured, semi-structured):
What is your name?	S: Easy question	Any
How many kwh do you think your dorm uses every day?	W: invites guessing, and overgeneralization. Should at least be past-tense.	Any
Suppose you were given the option to control how much power your dorm used, and further that you had been given a lot of data about how much each room and wing made use of, and had been given plenty of time to study all of that data. Based on all of this history, what kinds of decisions would you like to be able to make about future use of power by the rooms and wings in the dorm?	W: Too complex	Any
Why do you think <insert answer to previous question>?	S: Good question -- specific, concrete, short.	Semi-structured
How many lights do you usually keep on when you are in your room at night?	W: invites overgeneralization. Should be past-tense.	Any

6. (Observations) 12 points. Write a fake VERY SHORT *observation* of a user. For example, it could be a 30-second portion of an observation of Justin's in-class basketball demo, or anything else.

The grade for this question comes from whether it has *all the elements* that should be in field observations of users. (Expected length: about 5-10 sentences, or use a sketch if you prefer).

7. (Interface types, concepts). 20 points.

a. Sketch concepts for two *interface types* for a meeting room scheduler.
b. Choose the one you think is best and give two *justifications* why.

(Not applicable to CS565)