IEOR 170 Midterm Spring 2007
March 12, 2007 5-6:30PM
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Note: This is an in-class, close book midterm. You cannot leave the classroom before
5:30PM and you are not allowed to take the exam if you are late for more than 30
minutes without prior notification. This class has a ZERO TOLERANCE POLICY ON
CHEATING.

1. Please give three of the seven IDEO rules for brainstorming (no more than three
    sentences). (10%)

2. What is "affordance"? (no more than two sentences) Give one real world example
    to show the negative impact of failing to provide the correct "affordance" in a
    design. (no more than two sentences) (10%)

3. What is a "persona"? (no more than two sentences) Suppose you are responsible
    for designing a four-door mid-sized family car for an auto company, please create
    a persona for this project. (no more than 5 sentences) (15%)

4. For new users, it's usually easier for them to learn computer applications with a
    graphical user interface (i.e. GUI) than to learn those with command-line only
    interface. What's the design principle we discussed in-class that can explain such
    a phenomenon? (one sentence) Please give one more real world example of such
    principle. (no more than two sentences) (10%)

5. What are the three main **perceptual attributes** of sound? (the answer should be
    exactly three words). If you double the **physical intensity** of a sound, how many
    more dBs is the resulting sound? (15%)

6. Please give two reasons on why we should use low-fidelity/paper prototypes in
    the early stage of the design. (no more than two sentences) (10%)

7. What's the digital camera technology described in the "Adopting Technology"
    article we have read? (one sentence) Name one difference between the new
    technology and the previously existing technology. (no more than two sentences)
    (10%)

8. Please briefly describe the contextual inquiry procedures you would set up for
    designing a new chair for kids in elementary school. (20%)