

# Engenharia Informática (DI/FCT/UNL)

2008/2009

## Interacção Pessoa-Máquina

### Exam

February 12, 2008

Duration: 2h

The exam is in English. You may answer the questions in English or Portuguese. Either way, you should be concise and clear.

- 1) Circle the one answer that best completes the sentence “The ideal frame rate of a movie is primarily determined by the cycle time of the”:
  - A. perceptual processor
  - B. motor processor
  - C. working memory
  - D. cognitive
- 2) Give two reasons why small blue text on a dark grey background might be hard to read.
- 3) Give two general techniques for preventing mode errors.
- 4) Consider the Donald Norman interaction model. It comprises seven stages. List them all in the correct order.
- 5) In which cases it is especially appropriate to use the wizard of OZ prototyping method?
- 6) Give one way that the Olympic Message System used iterative design.
- 7) Point out four graphical design principles (following Mullet and Sano).
- 8) Point out three main goals of evaluation.
- 9) The following comments belong to a heuristic evaluation performed on a web site. Name a heuristic that justifies each of the following usability problems found during the evaluation.
  - a) “The form’s Clear button is too prominent and too close to the Save button.”
  - b) “Hyperlinks are not underlined.”
  - c) “Documents in the library are listed by an obscure product code, instead of by title.”
  - d) “The form has unaligned text boxes and buttons”.
  - e) “It asks for the user’s personal information every time the user performs a new operation.”

- 10) Circle the one answer that best completes the sentence “A between-subjects experimental design”:
- A. means that each participant uses all of the systems being compared.
  - B. specifies what occurs between the time you test two different participants.
  - C. means that each participant uses only one of the systems being compared.
  - D. reduces the variability in the results.
  - E. is best for testing low-level interaction techniques.
- 11) Consider the following two methods for saving the current opened file in a Spreadsheet as “test.xls”. Present the keystroke level model for these two methods. For each step, indicate the user action. You don’t need to indicate the exact time value for each action.
- a) Method 1: Use only the keyboard to open the dialog box “Save As” (Alt-F-A).
  - b) Method 2: Use the mouse to select the option “Save As...” in the file menu and open the “Save As” dialog box, and use the keyboard to enter the file name.
- 12) Describe two important differences between heuristic evaluation and user tests.

**GOOD WORK!**