Quiz 1

This quiz is closed book, closed notes. You have 80 minutes to complete it. Each question is worth 3 points (out of 100) unless otherwise noted.

Your name: _____

1. Memorability (or ease of recall) is one of the dimensions of usability. List the other 4 dimensions.

2. Clerks in a law firm are observed printing hard copies from the computerized filing system and making notes on them by hand. This suggests that the filing system had an incomplete:
   a. heuristic evaluation
   b. task analysis
   c. user analysis
   d. Wizard of Oz prototype

3. The Macintosh menu bar is faster than the Windows menu bar primarily because of
   a. the power law of practice
   b. task analysis
   c. perceptual fusion
   d. Fitts's Law

4. 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 processor

5. Describe how an interface's memorability can be tested.

6. Red-green color blindness is caused by:
    a. fewer rods in the fovea
    b. yellowing of the lens or aqueous humor
    c. weak S cones
    d. weak M or L cones
    e. chromatic aberration

7. Chromatic aberration affects:
    a. 8% of males
    b. Older people
    c. Tritanopes
    d. Everybody

8. Give one advantage of the spiral model of user interface development.

9. Users of the waterfall model often end up doing iterative design anyway. Explain how this happens.

10. (4 points) Give an example of something that has a perceived affordance but not an actual affordance, and explain why.

11. List the 4 memories in the model human processor.

12. Give 2 reasons why small blue text on a dark gray background might be hard to read.

13. You can load a VCR tape the right way because of:
    a. physical constraints
    b. logical constraints
    c. semantic constraints
    d. cultural constraints

14. You push Play after loading the tape, rather than before, because of:
    a. physical constraints
    b. logical constraints
    c. semantic constraints
    d. cultural constraints

15. The Play button is labeled by a rightward-pointing arrow because of:
    a. physical constraints
    b. logical constraints
    c. semantic constraints
    d. cultural constraints

16. (4 points) Give an example of a mapping that is natural but not direct, and explain why.

17. (5 points) Consider the vertical scroll bar of a web browser or word processor. For each of Norman's five principles below, give one way that the scrollbar uses the principle for effective design.

Affordance:

Constraints:

Mapping:

Visibility:

Feedback:

18. Name 3 kinds of slips.

19. I want to email a file to a friend. I start a new message, type in the body, write my name at the end, and then press Send -- forgetting to attach the file. This is best described as:
    a. capture error
    b. mode error
    c. description error
    d. mistake

20. I choose a file from a list, but instead of pressing the Retrieve button to download it, I accidentally press the Remove button and delete it. This is best described as:
    a. capture error
    b. mode error
    c. description error
    d. mistake

21. While typing in a word processor, I press Ctrl-P intending to move the cursor up one line (as it does in Emacs), only to see the Print dialog appear instead. This is best described as:
    a. capture error
    b. mode error
    c. description error
    d. mistake

22. Give 2 general techniques for preventing mode errors.

23. Explain the difference between *internal* consistency and *external* consistency.

24. List the 3 Nielsen heuristics that concern errors.

25. Which of the following problems is heuristic evaluation least likely to reveal:
    a. A button is too small
    b. A frequently-used command has no shortcut key
    c. Color choices are bad for color-blind users
    d. Many target users are illiterate

26. (2 points) What technique would be better than heuristic evaluation for revealing the problem that was missed in question 25?

27. Which of the following problems is paper prototyping least likely to reveal:
    a. A dialog box is missing a Cancel button.
    b. Status bar messages go unnoticed.
    c. Users don't expect to find the Sort command on the Tools menu.
    d. A CD case is a poor metaphor for a CD player.

28. Give 3 reasons why paper is an effective prototyping tool in the early stages of design.

29. Give one important similarity and one important difference between paper prototyping and Wizard of Oz prototyping.

30. List 7 visual variables.

31. (4 points) Ben Bitdiddle is designing the style sheet for his thesis, which will be printed in color. He decides to make the section headings red and the subsection headings blue, but the headings are otherwise identical – same font, same size, same position relative to the body text. Ben justifies his decision by appealing to a graphic design guideline. Which one?

What's wrong with his choice of visual variable?

32. Which target is fastest to reach with the mouse starting at location M? Assume that you can move your hand equally well in all directions, and that none of the targets is near a screen edge.

    a. A

    b. B

    c. C

    d. D