School of Information Technology
Indian Institute of Technology Kharagpur

IT60110: Human Computer Interaction

Mid-Semester Test
Spring Semester, Session 2006-2007

Time: 02 Hours   **Full Marks: 60**

Attempt **ALL** Questions

1. Give brief answers to the following questions.

    (a) Why the keys in the standard keyboard in our desktop computer are not arranged in alphabetical order?   2

    (b) Why natural language based interaction style is treated as the best interaction style among all other interaction styles.   3

    (c) Why HCI is termed as a multidisciplinary field. Support your answer with examples.   4

    (d) What do you mean by the concept of "High-bandwidth applications" in the context of HCI?   2

    (e) What do you mean by the criteria "Visibility of action" in direct manipulation based interaction style?   2

    (f) What are the possible input/output mediums in direct manipulation technique?   3

    (g) What is user modeling in HCI?   2

    (h) Give a precise definition of human and computer in HCI.   2

    (i) What is the concept of WIMP?   2

    (j) What do you mean by the "Cognitive level" and why it is important for designing HCI?   3

2. What are the eight golden rules proposed by Ben Shneiderman? Explain the importance of the rules in the design of user interface. 4+4

3. Suppose it is required to design a web page for air ticket reservation system. The system should cover one or more domestic as well as international airlines. With reference to the design of such a usability answer for the following questions.

   (a) Decide a suitable task profile that fits the design. 3

   (b) What are the things you should consider so that it appeals all users irrespective of their knowledge level? 3

   (c) What are the things that you should consider to prevent errors while user interacts with the system? 3

4. A text entry system is needed to be developed for the physically disabled user. Assume that their disability is due to motor impairments (because of some accidents, wrong medical treatment etc.). Further, these people are not necessarily novice and cannot operate conventional computer systems. What necessary arrangement you should provide so that the conventional computing system can be extended to them. You may include the following consideration (not limited to) in your consideration.

   (a) Input to the system 5

   (b) Interaction style 4

   (c) Adaptation with the ability of user's skill and capability 4

   (d) Rate enhancement strategy 5

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