



UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH
College of Informatics and Electronics

Academic Year	2006/2007	Semester:	Autumn
Module Title	Human-Computer Interaction	Module Code	CS4826
Time allowed	2½ Hrs	% of total	50
Lecturer	Michael Cooke	Marked out of	100

Instructions to Candidates:

- **Attempt any four questions.**
- **All questions carry equal marks.**

Q1 Consider the following statements. For each one state whether you agree with it or not and write a short paragraph explaining your answer.

1. When designing a drop down menu you should avoid presenting the user with more than nine options at a time. (5 marks)
2. When designing a user interface you should seek to maximise affordances and minimise constraints. (5 marks)
3. Perception involves both bottom-up and top-down processes simultaneously. (5 marks)
4. Saturated blue, because of its high contrast value particularly against a red background, is an ideal colour for text. (5 marks)
5. The “Cocktail Party” phenomenon demonstrates that much of the information processed by our attention system is processed unconsciously and this emphasises the role of physical differences between stimuli. (5 marks)

Q2 Imagine you have been given the task of designing a hand-held device for ordering food in a restaurant and you wish to get some early feedback from users and other designers. Construct a scenario, set of sketches or a simple storyboard that would communicate to users and other designers how you think such a system might work in terms of interaction. (25 marks)

Q3 Attempt all three parts:

1. Radio buttons and check boxes are two means of allowing users to make choices. However, both conform to different conventions and therefore are used for different purposes. Explain the conventions behind each one and indicate how you would decide whether to use a radio button or check box for a particular purpose. (8 marks)
2. The design of icons often employs metaphor, direct mapping and convention. Explain these terms as they relate to icons and for each one give an example of an icon designed with these principles in mind. (8 marks)
3. From a usability standpoint command line interaction is generally considered poorer than the graphical user interface using direct manipulation. Can you suggest any ways in which command line interaction may provide advantages to the user and for what kind of user would these advantages be most apparent? (9 marks)

Q4 While user-centred design emphasises the importance of the user as a source of information for requirements, design and evaluation, we have to be careful not to take their verbal input at face value. Discuss the reasons for this and indicate how these problems might be overcome. (25 marks)

Q5 Imagine that you are an interactive systems designer in a company that is seeking to develop interactive products for use by the elderly in their homes to assist them in their daily activities. The company's typical strategy for gathering requirements has been to use focus groups and questionnaires, carried out by the marketing department. Write a report (2-3 pages) addressed to management arguing for undertaking ethnographic field investigations including its benefits for this particular context. Include in your report some examples of how ethnographic methods have been usefully employed in other contexts. (25 marks)

Q6 When HCI emerged in the early 1980s it was influenced mainly by psychology in terms of theory and methods. However, since then, the importance of psychology in HCI has been reduced. Write a short essay (2-3 pages) critically evaluating the role that psychology has to play in contemporary HCI. (25 marks)