

OLLSCOIL NA hÉIREANN, GAILLIMH  
THE NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER II EXAMINATIONS 1999/2000

Third Examination in B.A.  
Higher Diploma in Software Design and Development

CT318: HUMAN COMPUTER INTERACTION

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Ms. K. Young

Time allowed: TWO hours

Answer **Question 1** and any **two** other questions of your choice

All questions carry equal marks

1. (a) *An understanding of human strengths and weaknesses is needed for good interactive system design.*  
Discuss this statement, drawing on all relevant aspects of your HCI studies.  
Include relevant examples, where appropriate, to support your opinions.  
[10]  
(b) The choice of an interaction style is very often the first decision made by an interface designer in designing an interactive system. Describe the variety of styles available to the designer (these should incorporate all three different approaches), and the factors to be taken into consideration in making design choices.  
[6]  
(c) You have been asked to design a system for restaurant management. Produce a paper prototype of the main interface screen, outlining the rationale for your choice of interaction style and any other design choices made.  
[4]
2. Write a detailed description of three of the following subjects, illustrating your answer with practical examples where relevant:  
  - GUI Style Guides
  - Co-Operative Evaluation Method
  - Task Analysis
  - Hypertext
  - Online Help Design

[20]

3. (a) Effective human computer interaction is difficult to design, and heavily reliant on evaluation, an activity central to the whole design process. Discuss the importance of evaluation to effective interactive system design. Your answer should include references to the different approaches and techniques, the evaluation context, the importance of test design, and should also be illustrated with relevant examples where appropriate.

[14]

- (b) What is contained in an evaluation plan for an interactive system? Briefly outline an evaluation plan for each of the following systems:

A promotional website  
An interactive computer game

[ 6]

4. (a) Ubiquitous computing is defined by an attempt to break away from traditional interaction paradigms and move computational power into the environment that surrounds the user.

*"The computer revolution will be judged, not by the complexity or power of technology, but rather by the service to human needs... The metaphors, images and names chosen for systems play a key role in the designers' and the user's perceptions."* Shneiderman (1998)

Discuss Shneiderman's above statement in relation to the two differing approaches of Ubiquitous Computing and Virtual Reality. Your answer should include explanations of each, supported with any practical examples, and outline their suitable application areas.

[14]

- (b) Write a note on the role of standards (physical, syntactic and semantic) in supporting the design of interactive systems, including references to any relevant examples from your HCI studies or personal experience, as appropriate.

[ 6]