NUI Galway
OÉ Gaillimh

Autumn Examinations 2010/ 2011

Exam Code(s)	3IF121; 3BA1; 4BA1;1MF1; 1SD1
Exam(s)	B.Sc. in Information Technology B.A. MSc in Software Design and Development Higher Diploma in Software Design and Development
Module Code(s)	CT318 CT865
Module(s)	Human Computer Interaction
Paper No. Repeat Paper	1
External Examiner(s) Internal Examiner(s)	Prof. Michael O'Boyle Dr. Jim Duggan Ms. Karen Young
Instructions:	Candidates should answer **Question 1** and **two other** questions. All questions carry equal marks.
Duration	2 hours
No. of Pages	3

Requirements:
MCQ
Handout
Statistical/ Log Tables
Cambridge Tables
Graph Paper
Log Graph Paper
Other Materials

Release to Library: Yes ☐ No ☐

Q.1. You have been asked to design the information system for a new cycle path network that is to run through parts of Galway town and surrounding areas. The aim of the system is provide information on directions and distances for leisure cyclists to the main points of interest in the town. It also needs to provide information on other things, such as bus and train times for those cyclists who are commuting to and from work.

(a) Undertake a PACT analysis for this application.

[5]

(b) Produce a paper prototype of three of the interface screens, representing the system's functional organisation and overall "look and feel". Clearly outline your rationale for each of the design choices you make.

[9]

(c) Prepare an evaluation plan, clearly outlining what activities, when, how and by whom the evaluation activities will be undertaken, for the system which will support comprehensive testing of your design.

[6]

Q. 2. (a) Good design requires good designers, not expensive tools. Comment on the validity of this statement and what it means for interaction design education. Support your answer with relevant examples.

[8]

(b) Distinguish between a *conceptual model* and a *prototype*.

[4]

(c) Design principles are intended to cover all interactive systems. Their generalisability is both their strength and weakness. Discuss the role of design principles in developing good interactive systems. In your answer consider the use of these principles in all designs: how important is context in the application of these principles?

[8]

Q. 3. (a) Go-Pal is your friendly mobile companion. Go-Pal moves from your alarm clock to your mobile phone to your TV. Go-Pal helps you with things such as recording your favourite TV programme, setting the security alarms on your house, remembering your shopping list and remembering special days such as birthdays. Discuss the design issues that Go-Pal raises.

[10]

(b) Comment on the role of *posture* in interactive system design: what it is and how it impacts the design choices made.

[4]

(b) Choose an appropriate evaluation method for each of the following situations. In each case identify: the participants, the technique used, the representative tasks to be examined, measurements that would be appropriate, and an outline plan for carrying out the evaluation.

(i) You are designing a new web-based project management application for project management professionals.

(ii) You have a prototype for an online television licence payment system that you wish to test before release.

(iii) You have designed and implemented a new multi-player game system and want to evaluate it before release.

[6]

Q. 4. (a) You have been tasked with developing a prototype UI (User Interface) for your company's new time management system. The brief highlights the need to minimise users' negative emotions (frustration, fear, anger, etc.) when using this new system. Discuss the design issues that this new UI raises, and outline a conceptual model for the design.

[8]

(b) Write a one-page memo to your colleagues in your software design company, advocating the requirement to incorporate physiological data collection in all interactive product evaluations from a future date.

[6]

(c) What makes something easy to use? What are the properties of an interactive system that make it easy to use? Modify your list to make it specific to an ageing population.

[6]