

***Ollscoil na hÉireann, Gaillimh***  
***National University of Ireland, Galway***

GX 0077

**Semester I Examinations 2005/2006**

Exam Code(s)	3IF121; 3BA
	1SD1
Exam(s)	B.Sc. in Information Technology
	B.A.
	Higher Diploma in Software Design and Development
Module Code(s)	CT318
	CT865
Module(s)	Human Computer Interaction
Paper No.	1
Repeat Paper	Special Paper
External Examiner(s)	Professor John A. Keane
	Professor Sally McClean
Internal Examiner(s)	Dr. M. Madden
	Ms. K. Young

**Instructions:**

Answer **Question 1** and any **two** other questions of your choice.  
All questions will be marked equally.

Duration 2hrs  
No. of Answer Books 1

**Requirements:**

Handout \_\_\_\_\_  
MCQ \_\_\_\_\_  
Statistical Tables \_\_\_\_\_  
Graph Paper \_\_\_\_\_  
Log Graph Paper \_\_\_\_\_  
Other Material \_\_\_\_\_

No. of Pages 3  
Department(s) Information Technology

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]

2. (a) Research in human computer interaction has identified two distinct approaches to this cooperative interaction: the human centred and machine centred view. Norman characterises the differences in these approaches as those between analogue and digital agents. Contrast these two perspectives and discuss which you consider the best approach for effective interaction between humans and computers.

[12]

(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 at an early stage in the design of a calendar application and you wish to test what type of icons will be easiest to learn.
- (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.

[ 8]

3. Write a detailed description of **three** of the following subjects, illustrating your answer with practical examples where relevant:

Norman's Interaction Model  
Mental Models in UID  
UID Tools  
Anthropomorphism in UID  
Interaction Styles

[20]

4. (a) Brenda Laurel has described a website as live art: an ongoing performance which audiences visit that changes over time. How do current Web developments in the area of Web information systems support or detract from Laurel's metaphor of web design as theatre?

[10]

(b) 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)