Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

SEMESTER 1 EXAMINATIONS 2018/2019

MODULE: CA357 - Human Computer Interaction

PROGRAMME(S):

CASE	BSc in Computer Applications (Sft.Eng.)
EC	BSc in Enterprise Computing
ECSAO	Study Abroad (Engineering & Computing)

YEAR OF STUDY: 3,O

EXAMINER(S):

Donal Fitzpatrick (Internal) (Ext:8929)

TIME ALLOWED: 2 Hours

INSTRUCTIONS: **Answer all questions.**

PLEASE DO NOT TURN OVER THIS PAGE UNTIL YOU ARE INSTRUCTED TO DO SO.
The use of programmable or text storing calculators is expressly forbidden.

There are no additional requirements for this paper.

QUESTION 1 ***[TOTAL MARKS: 50]***

Q 1(a) **[10 Marks]**
A team which develops a user interface is made up of people from many different disciplines. List three disciplines, and explain their importance to the successful development of a user interface.

Q 1(b) **[10 Marks]**
Explain how we as humans perceive colour. In your answer, very briefly explain why this is relevant to user-interface design.

Q 1(c) **[10 Marks]**
When developing a prototype, you might use a "Wizard of OZ" approach. Explain what would be involved, and give one advantage and one disadvantage of using this technique.

Q 1(d) **[10 Marks]**
Ben Shneiderman has devised his "eight golden rules" for designing user interfaces. State five of these rules and give a one-sentence explanation of each one.

Q 1(e) **[10 Marks]**
Human memory is made up of sensory buffers, short-term memory, and long-term memory. Describe the role of each of these in the process of acquiring and processing information. Note eight or 9 bullet points will suffice for this entire answer.

[End of Question 1]

QUESTION 2 ***[TOTAL MARKS: 25]***

Q 2(a) **[12 Marks]**
User Interface Design should consider the particular characteristics of the medium or platform in order to maximise the usability of the designed interface. What, in your opinion, makes the design of interfaces for physical devices such as kiosks, ATM machines etc. different from that for other Graphical User Interfaces such as a stand-alone desktop PC. Note: about 5 or 6 sentences will suffice here.

Q 2(b) **[13 Marks]**
Describe in what stages of a system development the actual users (or some sample users) could participate to make a better product in the end, and if there is an established method that does this.

[End of Question 2]

QUESTION 3 ***[TOTAL MARKS: 25]***

Q 3(a) **[9 Marks]**

Usability of a user-interface can be measured in a number of different ways. These tell the system designer different things about the performance of the user-interface. Give three examples of performance measures that could be recorded in order to evaluate interface usability. In your answer explain why each of these would be useful in understanding the success or failure of an interface.

Q 3(b) **[16 Marks]**

You have been asked to design a kiosk which enables customers to purchase tickets for the Luas. There are two types of ticket: single and Return. There are four different categories of ticket depending on how far the passenger wishes to travel. Finally, the company who runs the system must, under law, ensure that the kiosk is usable by as wide a range of users as possible.

Explain how you would go about designing the kiosk under the following headings:

1. Usability;
2. Accessibility;
3. Efficiency.

In your answer, explain how you would implement the interaction on the kiosk.

[End of Question 3]

[END OF EXAM]