

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

B. Sc. Examination 2010

Computer Science

IS53008A (CIS322) User Interface Design

Duration: 2 hours 15 minutes

Date and time:

There are ve questions in this paper. You should answer no more than three questions. Full marks will be awarded for complete answers to a total of three questions. Each question carries 20 marks. The marks for each part of a question are indicated at the end of the part in [.] brackets. There are 60 marks available on this paper.

**THIS PAPER MUST NOT BE REMOVED
FROM THE EXAMINATION ROOM**

Question 1

- (a) You have been asked to design a web-site where users can browse or search for e-books and then purchase and download their choice. Explain how you would identify the potential end-users of such a service. [5]
- (b) Who are the stakeholders for this web site likely to be? How would the success of this website affect them? [6]
- (c) How would you conduct a summative evaluation for these users once the system had been built? What problems might you encounter? [5]
- (d) Explain Veen's design principles for web page structure and how they could be of benefit to this web site. [4]

Question 2

- (a) Write a scenario for checking an online email account. [4]
- (b) For each of the tasks below, consider what kind of data gathering would be appropriate:
- i. setting up an online music store [3]
 - ii. upgrading accountancy software [3]
- (c) Assume that you are involved in developing a new e-commerce site for selling second-hand university text books. How would you take a user-centred approach in designing this? [10]

Question 3

- (a) In an evaluation task to measure the usability of a drawing package, a user is asked to replicate a drawing that is supplied on paper. Suggest four task goals that could be used to measure how successful the user has been. [4]
- (b) Describe and explain the steps involved in designing an online questionnaire. [6]
- (c) Consider the following statements regarding improvements to an interface:
- i. "When using this system, I am 70% more efficient than I was with the old one."
 - ii. "Using this interface, I have processed 25 more transactions today than my colleague who doesn't have this interface."
 - iii. "I have been working with this interface for two weeks and I have processed an average of 9 transactions fewer per day."

How much do each of these statements tell you about the quality of the new interface? [10]

Question 4

- (a) You have been asked to design a timetabling system for the College. Explain why your user group would be experts, novices or some blend of the two. What implications does this have for the design of the interface? [6]
- (b) Write a scenario for booking a room through the system. [4]
- (c) How might Norman's design principles be applied to such a room booking system? [10]

Question 5

- (a) What exactly is an affordance? Define. [2]
 - i. Give two examples of affordances in the real world. [1]
 - ii. Give two examples of affordances in user interfaces [1]
- (b) Consistency is important for users. Imagine that you have been asked to design the interface for a piece of software that supports email, text editing, graphics, networking and access to an online database. How would you go about designing the interface to ensure consistency? [6]
- (c) Suggest the key requirements (functional, environmental, data, user characteristics, usability goals and user experience goals) for a mobile mp3 player that can directly download music from the Internet. [10]