

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

Department of Computing

B. Sc. Examination 2016-17

IS53034A

Interaction Design

Duration: 2 hours 15 minutes

Date and time:

There are five 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 25 marks. The marks for each part of a question are indicated at the end of the part in [.] brackets.

There are 75 marks available on this paper.

Calculators are not permitted in this examination.

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

Question 1 Design scenario

A company is developing a tablet device for older people who are novice computer users. Imagine that you are required to design both the interface and physical components of this device.

- (a) What factors might you consider when designing such a device and its interface, given the specified user base? [7]
- (b) How would you investigate and test the user requirements? [8]
- (c) Draw your design and prototype sketches for the device, justifying your design decisions. [10]

Question 2 Design practices

You have been hired to use your human-computer interface expertise to help in the development of the user interface for software that allows science specialists to view and analyse their laboratory data. You decide to take an ethnographic approach to your formative evaluation study.

- (a) Describe what an ethnographic approach is in the context of user interface design. [3]
- (b) Describe THREE advantages of using an ethnographic approach. [6]
- (c) Describe THREE disadvantages of using an ethnographic approach. [6]
- (d) Describe what you would do in terms of collecting and analysing data to carry out the formative evaluation study using an ethnographic approach. Restrict the scope of your answer to the data entry screen of the user interface. [10]

Question 3 Evaluation

In the context of user interface design and evaluation, briefly describe how you would carry out the following briefs. Your descriptions must relate specifically to the scenario outlined.

- (a) Explain how you would carry out a card-sorting exercise to decide the structure and layout of the navigation menu for a website promoting tourism in a small city. [8]
- (b) Describe how you could use paper prototyping with a small group of users to evaluate the proposed toolbar for a social networking app. [8]
- (c) Explain how would you carry out a cognitive walkthrough of a cash machine (ATM) that customers have reported difficulties withdrawing cash from. [9]

Question 4 Design scenario

As an HCI consultant, you are asked to undertake a user-centred design of the user interface for a touch screen kiosk displaying customer information for a large international bank. To start the process you must gather user requirements from a group of users.

- (a) Describe the criteria you will use to select your user group. [3]
- (b) To obtain the initial user requirements, you have a choice between focus groups or postal questionnaires. Describe THREE advantages and THREE disadvantages of each of these methods. [12]
- (c) Describe THREE advantages and TWO disadvantages of using icons in this user interface. [5]
- (d) Describe how you would evaluate the usability of the icons for this user interface. [5]

Question 5 Essay

“The future has arrived, it’s just not evenly distributed yet.”
(William Gibson, Author)

Discuss what factors have to be addressed in interaction design in order for technology to be available to all users equally.

[25]