

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

Department of Computing

B. Sc. Examination 2016

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.

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

TURN OVER

Question 1 Identifying needs

- (a) You have to been asked to design the interface for an online music streaming service, aimed at young people. Consider both the type of user and the design processes you would use for this population.
- i. Describe the personal characteristics of this user base. [3]
 - ii. Explain in detail how you would identify the usability requirements for this kind of user. [5]
 - iii. Provide TWO different user personas who would use the service. [5]
 - iv. Provide TWO different task scenarios for the music service. [5]
 - v. Provide clearly-annotated mock-ups or storyboards for the interface. [7]

TURN OVER

Question 2 Requirements and tasks

- (a) You are designing an online educational game for children aged 10 to help them learn geography. What methods would you undertake for gathering user requirements and why? [4]
- (b) State TWO usability and TWO user experience goals your game might have and for each, suggest how might these measured. [8]
- (c) Imagine you have been asked to go into a school to see a prototype of your game being played by a group of children. You are to undertake direct observation. What problems might you experience with this method? Is it worthwhile? [8]
- (d) What disadvantages are there to direct observation? Suggest a second method of evaluation, justifying your choice. [5]

TURN OVER

Question 3 Design Approaches

(a) Describe the Participatory Design technique. [4]

(b) Give three advantages and three disadvantages of using Participatory Design. [6]

(c) Explain the difference between design heuristics, design standards, and design patterns. [3]

(d) Don Norman provides six “design principles” for interface design. These are:

Visibility

Feedback

Constraints

Mapping

Consistency

Affordance

For FOUR of the above, describe the principle and give an example of how it might be applied to a system or product. [12]

TURN OVER

Question 4 Evaluation

- (a) You have been asked to perform usability testing on an online system that allows students to book an appointment with their university's counselling service. The following questions apply to the usability testing process:
- i. What kind of concerns might the students have about using the system? [1]
 - ii. Why is it important to record the level of technological experience of the students? [2]
 - iii. The students are given five minutes to explore the system before starting the tasks. Why is this important? [2]
- (b) State SIX quantitative performance measures that could be used to collect data during the usability testing of the above system. [6]
- (c) Describe the environment that would be required in order to carry out this usability testing. [4]
- (d) Describe ALL the steps in the process that would be required in order to carry out this usability testing. [10]

TURN OVER

Question 5 Essay

- (a) Wearable technologies are on the rise but have also generated some controversy. Discuss and assess the concerns developers and users have with wearable products and systems, giving examples where appropriate.

[25]

END OF EXAM