UNIVERSITY OF LONDON   **CO3348 ZA**

BSc Examination

**COMPUTING AND INFORMATION SYSTEMS, CREATIVE COMPUTING
and COMBINED DEGREE SCHEME**

Interaction Design

Friday 11 May 2018: 10.00 – 12.15

Time allowed: 2 hours and 15 minutes

There are **FIVE** questions on this paper. Candidates should answer **THREE** questions. All questions carry equal marks and full marks can be obtained for complete answers to **THREE** questions. The marks for each part of a question are indicated at the end of the part in [.] brackets.

Only your first **THREE** answers, in the order that they appear in your answer book, will be marked.

There are 75 marks available on this paper.

No calculators should be used.

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Question 1
Design scenario

You are part of an HCI design team engaged to produce the new interface for a smart home management system that is also linked to home entertainment technologies. The novel feature of this application is that it includes a mobile phone app for interacting with the home.

  a. Describe **THREE** techniques for involving users in the requirements gathering process for this system.   **[15]**

  b. Choose **ONE** specific requirements gathering technique and outline the steps involved in conducting a session involving a representative cohort of users.   **[10]**

Question 2
Evaluation

The College has just designed new web pages that are aimed at providing information about work placements for students wanting to gain work experience. You are a usability consultant who is tasked with providing advice about usability and evaluation.

  a. Outline **THREE** methods you would use to gather usability criteria.   **[6]**

  b. Describe **FOUR** usability measurements you might take in this study.
                    [4]

  c. How might a sorting method be used to measure usability in this study? Give examples.   **[7]**

  d. How could heuristic evaluation be used to test usability in this study? Describe the process.   **[8]**

Question 3
Essay

Discuss what you understand by the term "*haptic interaction*" giving examples that are particularly relevant to applications of Augmented Reality (AR).   **[25]**

Question 4
Usability

Producers of domestic entertainment systems such as televisions have, in some cases, replaced a traditional push button remote control with a smart phone app used only through a touch screen.

    a. Describe **TWO** ways that, in practice, users are likely to find the touch screen less usable than a conventional button based remote control.

        [8]

    b. Describe **TWO** ways that some older people might have particular difficulty in using a smart phone app as a remote control for a television.

        [8]

    c. Describe how this approach might cause particular difficulties for users with disabilities, giving examples that might be relevant for different specific disabilities.

        [9]

Question 5
Design scenario

Assume you have to design a mobile phone app to remotely control a home security system including door locks, surveillance cameras and garage door openers. It would provide the same functionality as a wall mounted home security controller but would allow remote control of the system via the Internet. With clear and specific reference to the scenario for this question:

    a. Develop **TWO** design scenarios, clearly identifying potential users and possible tasks.

        [10]

    b. Show prototype sketches for this wireless remote system.   **[8]**

    c. Define a test plan explaining fully how you would carry out a usability evaluation of your design.   **[7]**

END OF PAPER