## COMPUTER SCIENCE TRIPOS Part II – 2015 – Paper 7

### 8  Human–Computer Interaction (AFB)

This question asks you to analyse the design of a familiar website, but applying fundamental principles of human-computer interaction rather than simply repeating web design conventions. Start by choosing the website that you will use for the remainder of the question. This can be any site that has sufficient complexity for the user to manipulate structured information, and should be a site that you yourself use regularly enough to be familiar with its interface. You may assume that the examiner is familiar with current versions of Facebook, Wikipedia, Gmail, Hermes webmail, YouTube and Amazon. If you wish to use a site other than one of these, please provide a pictorial sketch that you can refer to in your answer.

(a)  Name the website that you will refer to in the rest of this question, and explain the nature of the information structure that the user creates and interacts with when using this site. Provide a pictorial sketch if necessary, as described above. [1 mark]

(b)  Describe *two* aspects of the visual language (marks, symbols, regions, surfaces) used in the design of this site. For *each* aspect, explain the nature of the correspondence between the visual appearance and its meaning or purpose within the interaction design. [6 marks]

(c)  Describe a typical activity in which the user interacts with the information structure presented by the site. You should refer to *two* different Cognitive Dimensions that are particularly salient in this activity, and explain what effect *each* of these has on the user's experience. [6 marks]

(d)  Propose a way in which the visual design of the site might be modified, that would have an effect on *one* of the Cognitive Dimensions described in part (c). Consider any trade-offs that might result. [3 marks]

(e)  Describe how you could carry out an investigation to evaluate the effects predicted in part (d). [3 marks]

(f)  How would you classify the method you have described in part (e), using the distinctions between qualitative/quantitative, empirical/analytic, and summative/formative methods? [1 mark]