NEWCASTLE UNIVERSITY

SEMESTER 1 2008/09

HUMAN-COMPUTER INTERACTION

Time allowed – 1¾ Hours

Instructions to candidates:

Read the scenario carefully and then answer TWO questions.

Marks shown for subsections are indicative only

[Turn over

Scenario

A holiday home letting agent wants to install a purpose-built, electronic system that will allow customers to browse through, and book, the various houses that the business manages. When browsing, customers should be able to see detailed descriptions of the properties and the facilities that they offer, as well as availability and pricings. Information about the region surrounding a property should also be available. The system should be designed for use by all the agent's potential customers and take into account any special requirements of its environment. Note that the business has a substantial number of regular customers.

The staff of the agency must also have an interface to the system, not only for maintenance (such as adding/removing properties, setting prices and changing availability information), but also so that they can work with customers who ask for help.

The company also wishes to provide similar services to Internet users. They would expect their website and in-house systems to be well integrated, but both should suit the expectations and skill levels of their target users.

Question 1.

a) Describe the human factors and accessibility *issues* that should be considered when designing the interfaces to

    i)   the customer units   [8 marks]

    ii)   the staff systems.   [6 marks]

b) Including a description of any relevant hardware, outline a possible design for the interface to

    i)   the customer interface units   [7 marks]

    ii)   the staff systems.   [4 marks]

Remember to describe the hardware that would be required. Use pictures and diagrams where appropriate.

Question 2.

a) Several sets of principles have been proposed for describing various aspects of usability. Use illustrations drawn from the interface you propose for the shopping system to show how some of these principles can be applied in a design. [15 marks]

b) Discuss how you would tackle the issues raised by the need for accessibility for your system. [5 marks]

c) What methods might you employ to evaluate the usability of the system after you have implemented it? Describe the strengths and weaknesses of these methods, and recommend the most suitable for this case.

[5 marks]

Question 3.

a) Describe how you would approach the construction of the company's website so that it has a similar interface and the same kind of usability and accessibility characteristics as the purpose-built browsing points, but takes into account the difference in the way the customer is accessing the information. [8 marks]

b) What web browser/HTML facilities might you wish to avoid (or use sparingly) when creating the website and why? [6 marks]

c) How would you test and evaluate your website? [5 marks]

d) Discuss the advantages and disadvantages of using a single, web-based interface everywhere rather than having three different interfaces.

[6 marks]