

Attempt THREE questions only. All questions carry equal marks.

1.

(a) You are on your way to an evaluation planning meeting to discuss the company's new flagship product, the *GeeWizz* personal organiser (currently in prototype development). You have been allocated an assistant, a usability lab (with video facilities) and have 20 days to perform a comprehensive evaluation of the prototype before serious development commences. You have been provided with access to a small number of potential users who have volunteered to take part in an evaluation. During a recent market survey the respondents rated the usability of such products as a highly attractive feature, more so than the degree of functionality and the aesthetics of design. It is for this reason that your division is under considerable pressure to deliver a well designed product. In preparation for the meeting outline an evaluation plan for the product paying particular attention to:

- the goal and scope of the evaluation;
- the data to be collected;
- the methods you would recommend using to collect the data.

[18 marks]

(b) So-called 'discount usability methods' are often employed for the purposes of user-centred evaluation. Describe TWO discount usability methods that you are familiar with. What problems are associated with such methods?

[10 marks]

(c) Under what circumstances would such 'discount usability methods' be more appropriate than lab-based empirical evaluations?

[5 marks]

[Total 33 marks]

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2.

a) Explain the purpose of task analysis and how it is carried out.

[10 marks]

b) What are the pros and cons for the suggestion that a user interface design should closely follow the users' tasks?

[8 marks]

c) Using a hierarchical notation (either Hierarchical Task Analysis or a textual form), analyse the task of photocopying an article from a journal in the library at UCL. Represent this process from finding the journal to the point where you leave the photocopier with your photocopy card.

[15 marks]

[Total 33 marks]

3.

a) What are the particular benefits of observational studies during system requirements definition? What are the limitations of these studies?

[10 marks]

b) What is participant observation? Give an example.

[5 marks]

c) In the context of studying users' work practices, discuss the relative merits of scientific detachment vs. personal involvement in the work place.

[18 marks]

[Total 33 marks]

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4.

(a) Explain the differences between the use of prototypes in traditional software engineering and their use for exploration in user-centred design.

[18 marks]

(b) Discuss why 'lo-fi' prototypes, i.e. ones which are clearly mock-ups, are thought to be particularly useful in cooperative design.

[15 marks]

[Total 33 marks]

5.

(a) Explain the problems faced by a designer trying to apply *conceptual design* in practice.

Why do attempts at applying this approach often fail?

[17 marks]

(b) Explain the barriers to making the *design process* user-centred in each of the following situations

(i) design of a new software product aimed at a large market of users in small businesses

(ii) design, by outside contractors selected by competitive tender, of an interface to be used by mobile emergency services staff for communicating data to and from a control center.

[16 marks]

[Total 33 marks]

END OF PAPER