ANSWER 3 QUESTIONS

1. ***Task Analysis***

(a) Characterise the process of task analysis, once it has been determined that some form of task analysis would be useful in a system development project.

[10 marks]

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(b) Reflect on the process of typing a letter with a word processing application, and posting that letter. Represent this process, from starting up the computer to posting the letter in a post box, using Hierarchical Task Analysis.

[15 marks]

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(c) Developers of a Video-on-Demand application think it wise to employ five new graduates to perform HTAs on customer behaviour when browsing and selecting videos in five different high street video outlets. These graduates will be in different parts of the country, and the HTAs will be posted back to the developers. When the project manager examines these HTAs, what problems do you image s/he will have when it comes to comparing different HTAs completed by different analysts?

[8 marks]

[Total 33 Marks]

2. *Evaluation*

(a) A prototype web-site to support the purchasing of compact discs has been implemented by a major retail company. You are to evaluate this site within the following constraints:

- yourself as the only evaluator
- three working days
- access to a single version of the fully functional web-site
- access to unlimited users
- video facilities
- some form of report must be presented.

Construct a plan to carry out an empirical evaluation of this site. What methods would you use in conducting such an evaluation, and how would those methods be configured to accommodate the given constraints?

[23 marks]

(b) If such a web-site were still in development, and designers had specifications of screen layout, command naming, and a system task model, how might an evaluation be undertaken?

[10marks]

[Total 33 Marks]

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3. *User Studies*

A manufacturer of Personal Digital Assistants (PDAs) plans to integrate a foreign language dictionary function in a forthcoming new model. You are asked to plan and conduct a user study to identify requirements and constraints as input for the design of the new model.

(a) Outline a plan for the user study. Clearly state the goal and scope of the user study (including number and types of users to be studied), and the type and amount of data you want to collect.

[18 marks]

(b) Describe how you would employ the following methods in this user study, and what type of data you can collect with them:

(i)   system logs;

(ii)   user reports;

(iii)   focus groups.

[15 marks]

[Total 33 Marks]

4. *Conceptual Design and Metaphors*

(a) Some design guidelines advocate the use of metaphors as design models. Explain the relationship between metaphor, user's model and design model in conceptual design.

[6 marks]

(b) Explain how a designer can evaluate a candidate metaphor for a particular system.

[10 marks]

(c) You are designing a user interface for a multimedia conference recorder (MMCR), and you have decided to use the metaphor of a video cassette recorder (VCR) as the basis for your design model.   Describe how you would proceed to implement a system image which cues the metaphor and supports the construction of an appropriate users' model.

[17 marks]

[Total 33 Marks]

5.   *Computer-Supported Collaborative Work (CSCW) and Multimedia Systems*

(a) Name and briefly describe the six dimensions which characterise collaborative tasks.

[6 marks]

(b) Apply the notion of seamless transition to the design of a videoconferencing system to support collaboration between geographically distributed work groups. Explain how a designer could support seamlessness in such a system, and discuss potential problems arising from such a design.

[12 marks]

(c) You are designing a multimedia system which demonstrates procedures for taking medication to patients in a hospital in a number of different languages. Which media would you use to communicate the different types of information?

[15 marks]

[Total 33 Marks]

[END OF PAPER]

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