

THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR OF SOFTWARE ENGINEERING - LEVEL 5
ECI5161 HUMAN COMPUTER INTERACTION
FINAL EXAMINATION 2012
DURATION: THREE HOURS



DATE: 24th March 2013

TIME: 0930 - 1230 HOURS

Answer *Question 1* from **Part A** and any *two* questions from **Part B**.

PART A

Question 1

Suppose you are asked to develop an interactive web site for a pre-school. Users of the web site are parents of the pre-school students. Parents can register with the web site using their email address and once approved by the administrator, user name and password will be emailed to them.

Mainly parents can do the following tasks after logon to the system.

- View available date/time in Calendar and book an appointment to meet the class teacher.
- Make the term registration fee and term fees online using their credit cards.
- Download documents, images and videos from the web site.

It is important to build the confidence of the users, so that they could use the web site effectively.

- a) Draw the Task Hierarchy Diagram based on the user analysis and task analysis. (10 marks)
- b) Create persona for a common user. (10 marks)
- c) Draw prototype screen designs for the system. (10 marks)
- d) Describe the colors, font details and other controls used in the prototype and justify your choices. (10 marks)
- e) How do you use cognitive walkthrough and heuristic evaluation techniques to evaluate these prototypes? (10 marks)

PART B**Question 2**

- a. Why is Human-Computer Interaction (HCI) considered to be an important area in the field of computer science and engineering? (10 marks)
- b. Explain the importance of the concept of Model Human Processor (MHP) in HCI. (10 marks)
- c. HCI is an Interdisciplinary subject. Describe how that each of the following disciplines have made contributions to HCI: (5 marks)
 1. Engineering and design
 2. Ergonomics and Human factors
 3. Social and organizational psychology
 4. Artificial Intelligence

Question 3

- a) Describe the "usability engineering lifecycle" process? (10 marks)
- b) Describe different prototyping methods used in interactive design. (10 marks)
- c) What is the difference between "Usability Evaluation" and "Usability Testing"? (5 marks)

Question 4

- a) "Tasks are not Goals". Explain the above sentence with an example. (10 marks)
- b) What are the main steps involved in the goal-oriented interaction design process. (10 marks)
- c) Explain the term parallel design. (5 marks)