

The Open University of Sri Lanka
 Faculty of Engineering Technology
 Department of Electrical and Computer Engineering



Study Programme	: Bachelor of Software Engineering Honours
Name of the Examination	: Final Examination
Course Code and Title	: EEI4361 – User Experience Engineering
Academic Year	: 2021/22
Date	: 20 th November 2022
Time	: 0930-1230hrs
Duration	: 3 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Three (03)** questions in **Two (2)** pages.
3. Answer All questions.
4. Section A has three questions. Answer should be written in the answer book provided.
 Answer for each question should commence from a new page.
5. This is a Closed Book Test (CBT).
6. Answers should be in clear handwriting.
7. Do not use a red pen.

Section A

(Essay Questions) Answer All Questions

Case 1

Due to online education students are unable to manage their attention and get easily distracted during online lectures conducted for 2 hours. It is difficult for students to stay attentive during 2 hr. lectures. In a physical setting, the lecturers would typically rely on perceiving and responding to student behaviors. Due to online lecturing, it is difficult to understand students' attention pertaining with lecture or not. Based on the study conducted, it is evident that students paid more attention only to graded activities during the lectures. To provide solution for the above mention issue a team has decided to develop a mobile application named LecMon, to help students to stay

attentive with in-class activities. LecMon will focus on “Behavioral Engagement” which is based on “Task Behaviour” (i.e., asking and answering questions/quizzes, participating in polls, commenting in lecture chats, and engaging in collaborative activities). The students will be rewarded with an “engagement score” which will count towards their final grade. LecMon would minimize students diverting attention to other activities like browsing the internet, social media, sleeping, chatting, and leaving lectures due to boredom. Main users of the LecMon would be students and lecturers.

Question 1 [55 Marks]

Answer the following questions referring to the above given ‘Case 1’.

- A. You are supposed to identify a list of activities LecMon would perform and draw up a task analysis for the system including Task Hierarchy Diagram. [10 Marks]
- B. Create a persona for an identified sample user. [10 Marks]
- C. Draw a selected three main prototype screen designs for the system.
You are supposed to describe the colors, font details and other controls used in the prototype screens with the justifications. [20 Marks]
- D. Briefly explain the terms “Cognitive walkthrough” and “Heuristic evaluation” and how are you planning to use those techniques to evaluate prototypes you have designed? You need to list the identified heuristics out of 10.

[15 Marks]

Question 2 [25 Marks]

Answer the following questions referring to the above given ‘Case 1’.

- A. Ishama and the team wanted to build the LecMon mobile application using a user centered design.
 - i. Briefly explain the term “User Centered Design” providing an examples. [10 Marks]
 - ii. How you make sure LecMon mobile application would be a User Centered Design. [10 Marks]
- B. What is organizational ergonomics and how you are planning to avoid the issues in organizational ergonomics? [5 Marks]

Question 3 [20 Marks]

- A. Discuss in brief the organization and working of the Model Human Processor (MHP). [10 Marks]
- B. Explain below statement using your own words.
“Norman points out that both “Experiential Cognition” and “Reflective Cognition” are essential for everyday life but that each requires different kinds of technological support” [10 Marks]

~End of the Paper~