UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2021 – 2nd Year Examination – Semester 4

IT4106 – User Experience Design
Part 2 - Structured Question Paper
(ONE HOUR)

Important Instructions:

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- This paper has **2 questions** and **5 pages**.
- **Answer all questions.** All questions **do not** carry **equal** marks.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.
  If a page is not printed, please inform the supervisor immediately.
- Calculators are **not** allowed.
- *All Rights Reserved.*

Questions Answered

Indicate by a cross (✗), (e.g. ✗) the numbers of the questions answered.

To be completed by the candidate by marking a cross (✗).	Question numbers		
	1	2	
To be completed by the examiners:			

1)

(25 Marks)

(a) The understanding of Human Computer Interaction (HCI) and User Experience Design (UX) evolved over the years which lead to different paradigms in HCI. Column A presents the different questions a UX practitioner explores in each paradigm.

Write the name of the paradigm against each question in Column B.   [14 Marks]

ANSWER IN THIS BOX

Column A- Question	Column B- Name of the paradigm
How can we fix problems that arise in interaction?	Paradigm 1
What existing situated activities in the world should we support	Paradigm 3
How can we support interaction without constraining too strongly by what can computers do or understand?	Paradigm
How can we improve the efficiency of computer use?	Paradigm 2
What are the values at the site of interaction and how can we support those in design	Paradigm 3
How can we accurately model what people do?	Paradigm 2
What mismatches come up in communication between computer an people?	Paradigm 2

(b) Explain the difference between User Experience Design (UXD) and User Interface Design (UID).

[04 Marks]

Answer in the box

User interface (UI) focus on series of screens, pages, and visual elements—like buttons and icons—that enable a person to interact with a product or service.

User experience (UX), focus on the internal experience that a person has as they interact with every aspect of a company's products and services

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(c) Mental models and Conceptual models are used in User Experience Design to improve the understanding of the product being developed. Briefly describe the difference between these two models. Use diagrams to illustrate your answer.

[04 Marks]

Answer in the box

- mental model represents a person's thought process for how something works
- A conceptual model is the actual model that is given to the user through the interface of the product.
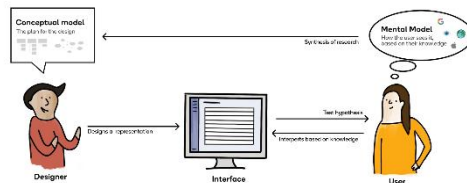
(d) There are different types of interactions when a person can interacts with a product. List three (03) such interaction types.

[03 Marks]

Answer in the box

1 Instructing

2. Conversing

3. Manipulating

Exploring

2)

(a) Read the following scenario and identify if this is a Gulf of Execution or a Gulf of Evaluation. Justify your answer.

A user who downloaded a new mobile application noticed that its method of notification is clearly different to that of other applications he uses. The screen indicates that he has received a notification, but it does not guide him on how to get access to that notification.

[06 Marks]

| **ANSWER IN THIS BOX** |
| --- |
| |
| Guld of execution |
| The user can derive what is meant by the system/output. Next he wants to reat the notification but the interface hardly gives a clue as to how to do it? |
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| |

(b) Design thinking is a non-linear, iterative modern approach to involve users in design in five (5) main stages. Explain the design thinking approach using a diagram. [07 Marks]

Stage 1: Empathize—*Research Your Users' Needs*

Stage 2: Define—*State Your Users' Needs and Problems*

Stage 3: Ideate—*Challenge Assumptions and Create Ideas*

Stage 4: Prototype—*Start to Create Solutions*

Stage 5: Test—*Try Your Solutions Out*

Design Thinking: A 5-Stage Process
Empathize → Define → Ideate → Prototype → Test
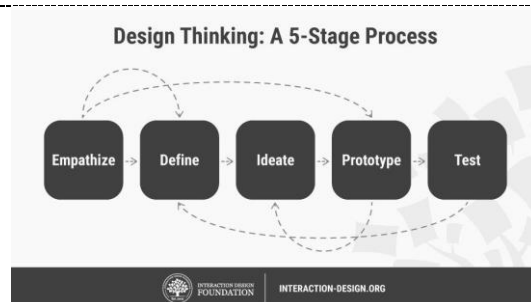
(c) Evaluating the product being developed is one of the most crucial stages in User Centred Design. A main issue a UX engineer need to address is the place the evaluation is carried out. Where evaluation takes place depends on what is being evaluated**.**

i) Write down the three (3) type of environments in which a user experience evaluation can take place.

[03 Marks]

> **ANSWER IN THIS BOX**
>
> 1. Lab Environment
>
> 2. In a Natural Setteing-/in situ/ in the wild
>
> 3. Remote setting

ii) Assume that you are a UX engineer and are tasked to conduct evaluations for the following three (03) user studies listed under column A of the following table. Write down the most appropriate type of environment to conduct the user experience evaluation for each of the following studies in Column B.

[09 Marks]

Column A: The study	Column B: Type of environment
A study to identify web accessibility of a webpage for differently abled users	**Lab**
A study to identify how long it takes for a child to get bored when playing a prototype mobile game	**In-situ/in the wild/ Natural**
To study the online behaviour of users when interacting with a social network	**Remote**

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