

**UCSC****University of Colombo, Sri Lanka***University of Colombo School of Computing***DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**Academic Year 2025 — 2nd Year Examination — Semester 4**IT4106 — User Experience Design***Part 2 - Structured Question Paper*

(2 Hours for both Part 1 and Part 2)

To be completed by the candidate**Index Number**

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Important Instructions

- This paper has **two (2) parts, Part 1 and Part 2**.
- The total duration of **both Part 1 and Part 2 is 2 hours**.
- The final mark for the paper will be determined by averaging the scores of Part 1 and Part 2, each of which is graded out of **100**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper (Part 2) has **2 questions on 8 pages**. Answer **both** questions.
- Write your answers **only on the space provided** on this question paper.
- Do not tear off any part of this question paper. Under no circumstances may this paper (or any part of this paper), 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 or part of a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.
- Calculators are **not allowed**.
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**To be completed by
the examiners**

1	
2	
Total	

Question 1 [50 Marks]

(a) Define User Experience (UX) and, using a brief example, explain the difference between a good and a poor user experience. State **two (2)** key principles of the User-Centred Design (UCD) approach.

[10 marks]

ANSWER IN THIS BOX

(b) *A team is designing a new mobile recipe application.*

- (i) Explain what a conceptual model is and why developing a conceptual model at an early stage of the design process is important. **[6 marks]**
- (ii) Identify **two (2)** interaction types that the application's conceptual model would rely on, and provide one example of each within the application. **[5 marks]**
- (iii) Suggest **one (1)** interface metaphor for the application and state one benefit of using it. **[3 marks]**

ANSWER IN THIS BOX

(c) Consider a mobile banking application.

(i) Explain what cognition is and why it is important for interaction design. **[4 marks]**

(ii) Select **two (2)** cognitive processes from attention, perception, or memory. For each, provide one design recommendation that supports that process in a mobile banking application. **[8 marks]**

(iii) Briefly explain how designing for positive emotions can improve the user experience of the application. **[2 marks]**

ANSWER IN THIS BOX

(d) *A bank is designing a walk-up self-service kiosk.*

(i) Recommend a suitable interface type for the kiosk and justify your choice. **[5 marks]**

(ii) Describe a simple low-fidelity prototype for the kiosk's main menu screen, and give **two**

(2) reasons why low-fidelity prototyping is appropriate at this early stage of design. **[7 marks]**

ANSWER IN THIS BOX

Question 2 [50 Marks]

(a) A university is redesigning its online library system (search, reserve, and renew books), which students and staff currently find confusing.

(i) Identify and briefly explain **three (3)** key issues the team must address when planning and conducting a data-gathering session. **[6 marks]**

(ii) The team decides to use interviews and observation for information gathering. State **one (1)** advantage of each technique for this study. **[8 marks]**

(iii) The team derives the following requirement:

“As a student, I want to renew a borrowed book online so that I avoid late fines.”

Draw or sketch a simple prototype of a screen that supports this requirement.

Label **at least three (3)** interface elements on your sketch, and write **one or two** sentences explaining how a user would use the screen to renew a book. **[11 marks]**

ANSWER IN THIS BOX

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(b) With reference to Question 2(a), a university is redesigning its online library system (search, reserve and renew books), which students and staff currently find confusing.

(i) Distinguish between qualitative and quantitative data analysis, giving **one (1)** example of each that could arise in this study. **[8 marks]**

(ii) The team must present its findings to non-technical university management. Recommend **one (1)** appropriate method for presenting the findings and justify your choice **[6 marks]**

(iii) The team intends to evaluate the usability of the redesigned system with real users before launch. Recommend a suitable evaluation method and justify your choice, and state **two (2)** usability measures the team could collect. **[11 marks]**

ANSWER IN THIS BOX

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