



Daffodil International University
Faculty of Science and Information Technology
Department of Information Technology & Management
Final Examination, Fall 2025

Course Code: ITM 211; Course Title: HCI and User Experience

Sections & Teachers: A (AR)

Time: 2:00 Hours

Marks: 40

Answer ALL Questions

[The figures in the right margin indicate the full marks. All portions of each question must be answered sequentially.]

1. a) Define the term "Ergonomics" in the context of HCI. Demonstrate the "Process of Design" by applying it to the design and development of a mouse. [Marks-5] CLO-3 Level-3
- b) Discuss the concept of Screen Design and Layout. Interpret the navigation design of a smartphone app UI and assess how its structure, flow and interactive elements affect user experience, efficiency and accessibility. [Marks-5] CLO-3 Level-5
2. a) *A mobile banking app allows users to check balances, transfer money, pay bills, and receive notifications. Some users are first-time mobile banking users, while others are experienced. The app runs on different devices and operating systems and must handle occasional server errors without crashing.*
Explain the following principles below in the context of the above scenario, providing examples for each: [Marks-5] CLO-4 Level-2
 - Principles to support usability
 - Principles of learnability
 - Principles of flexibility
 - Principles of robustness
- b) State the concept of user support and task analysis in HCI and Describe different approaches to user support. [Marks-5] CLO-4 Level-2
3. a) Summarize the concepts of Cognitive Walkthrough, Heuristic Evaluation, and Review-based Evaluation in user interface design, providing a brief example for each. [Marks-5] CLO-4 Level-2
- b) Design an experimental evaluation for a user interface, specifying the subjects, variables (IV & DV), hypothesis, and experimental design with proper justification. [Marks-5] CLO-4 Level-3
4. a) *A hospital develops an online appointment and patient record system where doctors, nurses, and patients access data from* [Marks-5] CLO-5 Level-3

different devices. The system must allow secure access to records, centralize data storage, and support simultaneous queries from multiple users.

Based on the scenario, **Select** the most appropriate architectural design from "Client-Server, MVC, or PAC" for the platform. **Illustrate** your choice with a diagram and **Explain** the architecture in brief.

4. b) **Classify** the following evaluation techniques in HCI into Observational Methods, Query Techniques and Physiological Methods, providing a brief example for each.

[Marks-5]

CLO-5
Level-4