



INSTITUTE OF COMPUTING AND INFORMATICS
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
UNIVERSITY EXAMINATION FOR:
BSCS ,BSIT, BTIT, BMCS
CCS 4304: HUMAN COMPUTER INTERCATION
END OF SEMESTER EXAMINATION P2
SERIES: NOV-DEC 2024
TIME:2HOURS

Instructions to Candidates

You should have the following for this examination
-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE [30 Marks]

- Identify and explain the interaction style you would you recommend for a novice user performing repetitive tasks. [3 Marks]
- List four** different interaction modalities used in multimodal interfaces. [4 Marks]
- Explain how usability impacts user satisfaction in interactive systems. [3 Marks]
- Explain how UCD improves the requirements-gathering process. [4 Marks]
- Outline** the primary characteristics of a touch interface. [4 Marks]
- Explain** how voice interaction is beneficial for users with physical disabilities. [4 marks]
- Which interaction modality—touch, voice, or gesture—would be most effective in a healthcare setting, and why? [4 Marks]
- Describe the main features of a command-line interface (CLI) and graphical user interface (GUI) [4 marks]

QUESTION 2[20 MARKS]

- How does simplification in user interface design contribute to better user experiences? [4 Marks]
- Describe 3 factors that you would you analyze when evaluating how well a system accommodates users with physical disabilities.** [6 Marks]
- Explain how you design a** user interface that adapts to both novice and expert users. [5 marks]
- Imagine you are designing an educational app for both children and older adults. Explain how you would apply user research findings to meet the needs of these two diverse groups in your design decisions. [5 Marks]

QUESTION 3[20 Marks]

- a. **Explain how** combining touch and voice interaction enhance user experience in mobile applications [4 Marks]
- b. Analyze the impact of not using prototypes during the design process. [6 Marks].
- c. Design a user-friendly interface for a mobile banking app that minimizes the impact of cognitive biases. [5 Mark]
- d. **Describe how you** would implement UCD principles in the design phase of a software project [5 Marks]

QUESTION 4[20 Marks]

- a. Explain what you understand by cognitive load, and how it impacts user interaction with interfaces. [4 Marks]
- b. Evaluate the importance of designing for users with disabilities in the context of web accessibility standards (e.g., WCAG 2.1). Explain how meeting these standards would benefit both users with disabilities and the general user population. [6 Marks]
- c. **Explain** the importance of usability testing in the design process. [6 Marks]
- d. Describe Four HCI principles you would include in a user interface for a mobile fitness app. [4 Marks].

QUESTION 5[20 Marks]

- a. **Explain** the importance of considering user diversity in HCI design. [3 Marks]
- b. **Describe how you** would you design an inclusive e-learning platform that supports both users with visual impairments and users from diverse linguistic backgrounds. [7 Marks]
- c. **Explain how** would you apply HCI principles to redesign an e-commerce website. [5 Marks]
- d. Outline how **you** would assess the effectiveness of an HCI-driven design. [5 marks]