

Roll No. ....

Total Pages : 3

**46307**

**BT-6/M-24**

**HUMAN COMPUTER INTERACTION**

**Paper-PC-CS-AIML-302A**

**Time : Three Hours]**

**[Maximum Marks : 75**

**Note :** Attempt five questions in all selecting at least one question from each unit. All questions carry equal marks.

**UNIT-I**

1. (a) Discuss the importance of reasoning and problem-solving abilities of humans in the design of user interfaces for interactive systems.  
(b) Define interaction models and explain how they guide the design of user interfaces in software systems.
2. (a) Analyze the principles of ergonomics in interface design and their importance for creating user-friendly computer systems.  
(b) Compare different interaction paradigms and their implications for interface design and user engagement.



## **UNIT-II**

3. (a) Explain the significance of interactive design basics in the development of user-friendly interfaces, providing examples of how process and scenario considerations influence design decisions.  
(b) Discuss the principles of screen design and the factors to consider when designing screens for different types of applications and user tasks.
4. (a) Analyze the role of HCI in the software development process, including its integration with software lifecycle models and usability engineering methodologies.  
(b) What do you mean by universal design in HCI? Explain its goals and principles for creating inclusive and accessible interfaces for diverse user-populations.

## **UNIT-III**

5. (a) Explain the concept of cognitive models in human-computer interaction (HCI) and discuss how they influence the design of user interfaces.  
(b) Discuss the importance of communication and collaboration models in HCI, highlighting their role in supporting effective interaction among users and between users and systems.

6. (a) Explain the concept of mobile application frameworks and provide examples of popular frameworks used for developing mobile apps. Also, define and differentiate between various types of mobile applications.
- (b) Identify and describe the essential elements of mobile design, such as screen layout, navigation patterns, and touch gestures.

#### UNIT-IV

7. Explain the concept of designing web interfaces, highlighting the key principles and considerations involved in creating effective and user-friendly web experiences. Also, compare different interaction techniques used in web interface design, such as drag and drop, direct selection, and contextual tools.
8. (a) Explain the concept of virtual pages in web interface design, discussing how they can be utilized to create dynamic and interactive user experiences.
- (b) Provide any one example of real-world case studies in web interface design, highlighting successful design solutions