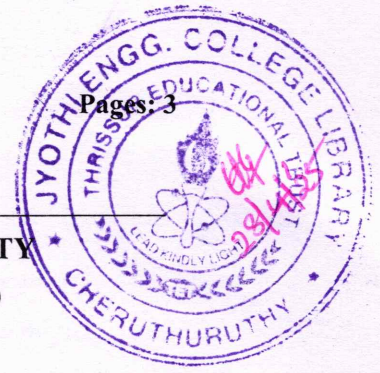


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

B.Tech Degree S8 (R,S) Exam April 2025 (2019 Scheme)

**Course Code:AMT416****Course Name: HUMAN COMPUTER INTERACTION****Max. Marks: 100****Duration: 3 Hours****PART A***Answer all questions, each carries 3 marks.***Marks**

- |    |   |     |
|----|---|-----|
| 1  | Define Human-Computer Interaction (HCI) and discuss its importance.   | (3) |
| 2  | List and explain three components of interaction in HCI.  | (3) |
| 3  | Explain the primary steps involved in the prototyping phase of the design process   | (3) |
| 4  | Discuss the advantages of using direct manipulation in interactive systems.   | (3) |
| 5  | Discuss the importance of animation in advancing user experience, providing examples of effective implementation.               | (3) |
| 6  | Discuss the impact of color on user experience in webpage design, emphasizing key principles.                                   | (3) |
| 7  | What are the key issues one should consider when conducting an evaluation in the field of Human-Computer Interaction?           | (3) |
| 8  | Describe the process of conducting experiments in the context of evaluating cognitive systems in HCI.                           | (3) |
| 9  | Outline the key design considerations for mobile computing, focusing on enhancing user experience for mobile devices.           | (3) |
| 10 | Discuss the applications of AI and interface agents in collaborative environments, emphasizing their impact on user experience. | (3) |

**PART B***Answer any one full question from each module, each carries 14 marks.***Module I**

- |    |  |     |
|----|--|-----|
| 11 | a) Develop a usability testing plan for an interactive system, considering diverse user groups and cultural variations.                | (7) |
|    | b) Explain the importance of considering cognitive and perceptual abilities when establishing usability goals for interactive systems. | (7) |



**OR**

- 12 a) Evaluate theories related to interaction design and usability principles. (7)
- b) Create a prototype for an interactive system that takes into account the cognitive and perceptual abilities of a diverse user group. (7)

**Module II**

- 13 a) Describe the role of HCI patterns in influencing design decisions. (6)
- b) Evaluate the effectiveness of navigation by selection in interactive systems and propose improvements. (8)

**OR**

- 14 a) Explain the concept of fluid navigation and how it enhances user experience. (6)
- b) Design a user interface using principles of direct manipulation and justify your design choices (8)

**Module III**

- 15 a) Evaluate the impact of system response time (SRT) on user satisfaction and propose strategies for optimizing SRT in interactive systems. (6)
- b) Evaluate the impacts of frustrating experiences on user engagement and propose a framework for minimizing such experiences. (8)

**OR**

- 16 a) Explain examples of frustrating experiences in user interaction and propose design strategies to alleviate them. (6)
- b) Design an information search interface that incorporates the Five Stage Search Framework, ensuring a seamless user experience. (8)

**Module IV**

- 17 a) Design an experiment to assess the effectiveness of a new interaction technique, incorporating principles of GOMS modeling. (7)
- b) Describe a scenario where heuristic evaluation could be more suitable than usability testing in HCI evaluation. (7)

**OR**

- 18 a) Explain the basic principles of the GOMS Model and how it aids in the analysis of user interactions. (7)
- b) Analyze and compare the strengths and weaknesses of usability testing and heuristic evaluation in different HCI scenarios. (7)



**Module V**

- 19 a) Discuss the key considerations in selecting an appropriate evaluation method for a specific HCI context. (7)
- b) Explain the primary technological categories that facilitate collaborative work. (7)

**OR**

- 20 a) Develop a comprehensive evaluation plan for a cognitive system, considering the specific goals and tasks involved. (7)
- b) Explain the key principles and best practices that designers should consider when crafting mobile experiences. (7)

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