

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Eighth Semester B.Tech Degree (R,S) Examination May 2024 (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

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|----|---|-----|
| 1 | What does the concept of Universal Usability entail? | (3) |
| 2 | What role does prototyping play in interface design iterations, and how does it contribute to the overall significance of refining user experiences? | (3) |
| 3 | How can HCI patterns be utilized in designing products or interfaces? | (3) |
| 4 | What are some effective strategies for achieving fluid navigation within a digital interface, particularly in web design or mobile applications? | (3) |
| 5 | List any three reasons for using animation in display design. | (3) |
| 6 | Explain three key components of a framework for User Centric Computing. | (3) |
| 7 | What are the main differences between heuristic evaluation and walkthroughs in usability Testing | (3) |
| 8 | Elaborate on the key principles and components of the Keystroke Level Model, and discuss its contribution to analysing and predicting task performance in human computer interaction? | (3) |
| 9 | What are some common challenges faced in collaborative work environments? | (3) |
| 10 | What are three key principles to consider when designing a rich web interface? | (3) |

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

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| 11 | a) Explain the relationship between the user experience and usability | (7) |
| | b) Describe user-centered design. What are its benefits? | (7) |

OR

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| 12 | a) Explain the difference between good and poor interaction design? | (7) |
| | b) What is cognitive and perceptual ability? Discuss with an example cognitive perception? | (7) |

Module II

- 13 a) Outline the various interface styles used in interactive systems? (7)
b) Discuss the obstacles to speech recognition and production? (7)

OR

- 14 a) Data entry is challenging for small devices. Explain the ways in which this issue can be addressed? (7)
b) Explain the different phases involved in an interactive design process? (7)

Module III

- 15 a) Explain how System Response Time (SRT) influences Human-Computer Interaction (HCI) and its various impacts. (7)
b) Define the Five-Stage Search Framework in Information Search and elucidate how it structures the process of information retrieval? (7)

OR

- 16 a) What are the challenges associated with tasks in data visualization? (7)
b) What are some of the widely adopted frameworks in user-centric computing, and how do they contribute to enhancing user experiences in digital environments? (7)

Module IV

- 17 a) What are the different types of evaluation methods used in the context of introducing new systems or technologies, and how do they contribute to assessing effectiveness and user satisfaction? (7)
b) How do predictive models help anticipate user behaviour or system performance, and what are some practical applications of these models? (7)

OR

- 18 a) How does the GOMS model utilize goal and task hierarchies to analyse human computer interaction, and what insights does it offer into user behaviour and task Performance? (7)
b) What are the common methods and metrics used in the evaluation of Human Computer Interaction designs, and how do they contribute to improving user experience? (7)

Module V

- 19 a) What are the primary technological categories that facilitate collaborative work? (7)
b) What are some key principles and best practices that designers should consider when crafting mobile experiences? (7)

OR

- 20 a) How do lists function within programming, and what are the fundamental characteristics of wearable computing? (7)
b) Discuss two practical applications exemplifying agent-based interaction. (7)
