BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Tech.(CSE)-AIML-2021/B.Tech.(CSE)-AIML-2022
Course Name – Human Computer Interaction
Course Code - PEC-CSM602B
(Semester VI)

Time : 2:30 Hours

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Cite an example of a human-machine interaction.
a) Talking to a friend b) Petting a dog
c) Using a smartphone d) Reading a book

(ii) Discover a method used for understanding users in HCI.
a) Surveys b) Astrology
c) Guesswork d) Magic

(iii) Choose the correct statement about interfaces.
a) Interfaces are irrelevant in HCI. b) Interfaces mediate interactions.
c) Interfaces hinder communication. d) Interfaces confuse users.

(iv) Choose the primary goal of HCI.
a) Frustrating users b) Improving user experience
c) Increasing complexity d) Isolating users

(v) Determine a common approach to data gathering in HCI.
a) Avoiding user feedback b) Observational studies
c) Guesswork d) Disregarding user behavior

(vi) Identify the role of interaction design.
a) Increasing user frustration b) Mediating user interactions
c) Hindering user experience d) Ignoring user feedback

(vii) Identify an essential aspect of user understanding in HCI.
a) Disregarding user needs b) Observing user behavior
c) Avoiding user research d) Ignoring user feedback

(viii) Locate a method for gathering data in HCI.
a) Telepathy b) Observational studies
c) Ignoring user feedback d) Random guessing

(ix) Choose the correct statement about user-centered system design.

a) It disregards user needs
b) It focuses on technology
c) It prioritizes user needs
d) It ignores user involvement

(x) Determine a method for user model evaluation.
a) Guesswork
b) Heuristic evaluation
c) Ignoring user feedback
d) Random selection

(xi) Cite a characteristic of cognitive walkthrough.
a) A. Dynamic processes
b) B. Static representation
c) C. Ignoring user feedback
d) D. Random selection

(xii) Choose the correct statement about cognitive walkthrough.
a) A. It focuses on technology
b) B. It represents user understanding
c) C. It disregards user feedback
d) D. It ignores user involvement

(xiii) Identify a characteristic of cognitive walkthrough.
a) A. Dynamic processes
b) B. Static representation
c) C. Ignoring user feedback
d) D. Random selection

(xiv) Predict the outcome of considering novice users' perspectives in interface evaluation.
a) a) Improved usability and user experience
b) b) Decreased user engagement
c) c) Increased complexity
d) d) Unpredictable results

(xv) Locate the best-suited model if requirements are easily understandable and defined
a) Spiral model
b) iterative model
c) Prototyping model
d) Waterfall Model

Group-B
(Short Answer Type Questions) 3 x 5=15

2. Illustrate critical mass (3)
3. Explain the concept of mental models and their relevance in Human-Computer Interaction (HCI), highlighting their impact on user interaction with interfaces. (3)
4. Describe the GOMS (Goals, Operators, Methods, and Selection rules) model and its role in analyzing user performance in Human-Computer Interaction (HCI). (3)
5. Develop a brief explanation of the core concepts underlying HCI and their significance in modern technology. (3)
6. Defend the use of cognitive walkthroughs as a method for evaluating system usability from the perspective of a novice user. (3)

OR

Explain what are paradigms and give examples (3)

Group-C
(Long Answer Type Questions) 5 x 6=30

7. Explain the concept of use-case driven design, discussing how it prioritizes user needs and scenarios in system development. (5)
8. Explain how key components contribute to the design process in HCI. (5)
9. Discover the strengths and weaknesses of heuristic evaluation as a method for assessing interface usability. (5)
10. Judge the effectiveness of cognitive walkthroughs as a method for evaluating interface usability from the perspective of a novice user. (5)
11. Express your opinion on the effectiveness of using metaphor in system understanding, providing reasons to support your viewpoint. (5)
12. Distinguish between research techniques and use-case driven design in the context of system development, highlighting their respective objectives and methodologies. (5)

OR

Justify the importance of considering cognitive dimensions of notations in interface design, discussing how they influence user comprehension and interaction. (5)