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Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Tech.(CSE)-AIML-2021/B.Tech.(CSE)-AIML-2022/B.Tech.(CSE)-AIML-2023

Course Name – Human Computer Interaction

Course Code - PEC-CSM602B

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[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) Identify the primary focus of Human-Computer Interaction (HCI).
 - a) Computer programming
 - b) Understanding user needs
 - c) Mechanical engineering
 - d) Financial analysis
- (ii) Locate the key aspect of interaction design.
 - a) System architecture
 - b) Understanding users
 - c) Supply chain management
 - d) Software development
- (iii) Recognize the nature of interaction in HCI.
 - a) One-way communication
 - b) Passive engagement
 - c) Dynamic exchange
 - d) Static interface
- (iv) Locate a strength of heuristic evaluation.
 - a) Objective analysis
 - b) Subjective assessment
 - c) Quantitative data
 - d) Ignoring user feedback
- (v) Recognize a weakness of heuristic evaluation.
 - a) Subjective assessment
 - b) Objective analysis
 - c) Quantitative data
 - d) Ignoring user feedback
- (vi) Cite a characteristic of the human processor model.
 - a) Static description
 - b) Dynamic processes
 - c) Random selection
 - d) Ignoring user feedback
- (vii) Discover a component of the keystroke level model.
 - a) Perception
 - b) Motor control
 - c) Weather conditions
 - d) Financial analysis
- (viii) Choose the correct statement about GOMS descriptions of user performance.
 - a) They ignore user feedback
 - b) They describe human processes
 - c) They focus on technology
 - d) They disregard human performance

- (ix) Determine a method for analyzing human performance.
- a) Guesswork
 - b) Quantitative analysis
 - c) Ignoring user feedback
 - d) Random selection
- (x) Cite a characteristic of controlled experiments.
- a) Random selection
 - b) Systematic manipulation
 - c) Ignoring user feedback
 - d) Static prototypes
- (xi) Discover a component of cognitive walkthrough.
- a) Physical objects
 - b) Abstract concepts
 - c) User feedback
 - d) Ignoring user feedback
- (xii) Determine a method for evaluating from the perspective of a novice learning to use the system.
- a) Cognitive walkthrough
 - b) Guesswork
 - c) Ignoring user feedback
 - d) Random selection
- (xiii) Cite a characteristic of cognitive walkthrough.
- a) A. Dynamic processes
 - b) B. Static representation
 - c) C. Ignoring user feedback
 - d) D. Random selection
- (xiv) Identify which of the following is not a design principle that allow the user to maintain control
- a) Provide for flexible interaction
 - b) Allow user interaction to be interrupt-able and undo-able
 - c) Show technical internals from the casual user
 - d) Design for direct interaction with objects that appear on the screen
- (xv) Employ the following is best in programmable system
- a) A system that depends on predefined inputs
 - b) A system that requires hardware modifications for changes
 - c) A system that can be updated or controlled using software
 - d) A system that does not allow user interaction

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Compare the use of heuristic evaluation with cognitive walkthroughs in evaluating interface usability, discussing their respective approaches and outcomes. (3)
3. Explain the concept of interaction design and its relevance in creating user-friendly interfaces. (3)
4. Discuss the concept of psychological user models and their role in Human-Computer Interaction (HCI). (3)
5. Define what is meant by agent-based interfaces. (3)
6. Distinguish between use-case driven design and research techniques in the context of system development. (3)

OR

Defend the importance of considering cognitive dimensions of notations in interface design. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Discuss the importance of user-centered design in HCI. (5)
8. Compare the use of design prototypes and cognitive walkthroughs in evaluating system understanding, highlighting their respective advantages and limitations. (5)
9. Describe Black Box models of human performance. (5)
10. Evaluate the effectiveness of using cognitive walkthroughs from the perspective of a novice user, considering how they contribute to identifying usability issues and improving system design. (5)

11. Analyze the role of contextual and qualitative studies in task analysis and design, discussing how they provide insights into user behavior and preferences. (5)
12. Write a brief explanation of the significance of evaluating system understanding from the perspective of a novice user. (5)

OR

Express your opinion on the effectiveness of using metaphor in system understanding, providing reasons to support your viewpoint. (5)

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