



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Tech.(CSE)-AIML-2021

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) 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
 - (v) Identify the primary focus of User-Centered System Design (UCSD).

a) Technology	b) User needs
c) Marketing strategies	d) Financial analysis
 - (vi) Locate a core concept of User-Centered System Design (UCSD).

a) Ignoring users	b) Focusing on technology
c) Understanding user needs	d) Random selection
 - (vii) Recognize a strength of interactive design.

a) Limited usability	b) Increased engagement
c) Static interfaces	d) Reduced user involvement
 - (viii) Cite a weakness of interactive design.

a) Enhanced usability	b) Dynamic interfaces
c) Reduced engagement	d) Enhanced user involvement
 - (ix) Choose the correct statement about GOMS descriptions of user performance.

- a) They ignore user feedback
c) They focus on technology
- b) They describe human processes
d) They disregard human performance
- (x) Determine a method for analyzing human performance.
a) Guesswork
c) Ignoring user feedback
- b) Quantitative analysis
d) Random selection
- (xi) Identify a component of the human processor model.
a) Weather conditions
c) Motor control
- b) Perception
d) Financial analysis
- (xii) Locate a factor included in the keystroke level model.
a) Perception
c) Weather conditions
- b) Motor control
d) Financial analysis
- (xiii) Identify the focus of cognitive walkthrough.
a) Physical objects
c) User feedback
- b) Abstract concepts
d) Ignoring user feedback
- (xiv) Locate a component of controlled experiments.
a) Random selection
c) Ignoring user feedback
- b) Systematic manipulation
d) Static prototypes
- (xv) Cite a characteristic of design prototypes.
a) Dynamic processes
c) Ignoring user feedback
- b) Static representation
d) Random selection

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write about the Human Processor Model and its application in modeling user performance in Human-Computer Interaction (HCI) tasks. (3)
3. Discuss the nature of interaction between humans and machines in the context of Human-Computer Interaction (HCI). (3)
4. Explain the components of black box models of human performance, including perception, motor control, memory, and problem-solving. (3)
5. Define what is meant by agent-based interfaces. (3)
6. Defend the use of cognitive walkthroughs as a method for evaluating system usability from the perspective of a novice user. (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. Explain the significance of using design prototypes in the development process, discussing how they facilitate user feedback and iteration in interface design. (5)
8. Compare the relevance of CSCW (Computer-Supported Cooperative Work) and ubiquitous computing in modern computing environments, discussing their respective applications and implications. (5)
9. Explain the concept of heuristic evaluation in HCI. (5)
10. Explain paradigms and give examples (5)
11. Write an explanation of the GOMS (Goals, Operators, Methods, and Selection rules) model and its role in analyzing user performance in Human-Computer Interaction (HCI). (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)
