

# Human-Computer Interaction Overview

---

**Your Name:**

**1. Which cognitive psychology concept directly underpins the usability principle of "recognition rather than recall" in interface design?**

- ☐ A. Short-term (working) memory limitations
  - ☐ B. Long-term memory, particularly its retrieval efficiency
  - ☐ C. Information processing model, focusing on motor output
  - ☐ D. Sensory memory, related to initial data storage
- 

**2. The User-Centered Design (UCD) process typically concludes after the initial design solutions are developed, moving directly to product launch.**

- ☐ A. True
  - ☐ B. False
- 

**3. Briefly explain the primary goal of Human-Computer Interaction (HCI).**

---

**4. In Nielsen's Usability Heuristics, the principle of "User control and freedom" emphasizes the need for a clearly marked "emergency ....." to allow users to leave unwanted states.**

---

**5. Match the interaction design paradigm with its defining characteristic:**

- |                          |                      |  |
|--------------------------|----------------------|--|
| 1.                       |                      |  |
| Graphical User Interface | <input type="text"/> | A. Seamlessly integrated, invisible environmental devices          |
| 2.                       |                      |  |
| Ubiquitous computing     | <input type="text"/> | B. Users submitted jobs and received output later                  |
| 3.                       |                      |  |
| Augmented reality        | <input type="text"/> | C. Overlays digital information onto the real world                |
| 4.                       |                      |  |
| Batch processing         | <input type="text"/> | D. Direct manipulation of graphical objects with a pointing device |
- 

**6. Which of the following is an example of a user-based evaluation method?**

- ☐ A. Usability Testing
  - ☐ B. Heuristic Evaluation
  - ☐ C. Cognitive Walkthrough
  - ☐ D. GOMS analysis
- 

**7. Aesthetic and minimalist design in a user interface suggests including all possible information to prevent users from needing to search for it.**

- ☐ A. True
  - ☐ B. False
-

**8. What is the primary difference between formative and summative evaluation methods in HCI?**

---

**9. Cognitive psychology helps designers reduce the cognitive ..... on users, leading to more intuitive and understandable interfaces.**

---

**10. Match the Nielsen's Usability Heuristic with its corresponding description:**

- |  |                      |   |
|--|----------------------|---|
| 1.   |                      |   |
| Consistency and standards                                  | <input type="text"/> | A. Providing plain language error messages with solutions |
| 2.   |                      |   |
| Visibility of system status                                | <input type="text"/> | B. Designing to stop problems from occurring initially    |
| 3. Error prevention  | <input type="text"/> | C. Providing appropriate feedback within reasonable time  |
| 4. Help users recognize, diagnose, and recover from errors | <input type="text"/> | D. Ensuring similar actions have similar meanings         |
-

**11. Which aspect of cognitive psychology focuses on how users interpret visual, auditory, and tactile information in an interface?**

- ☐ A. Attention
  - ☐ B. Problem-solving
  - ☐ C. Memory
  - ☐ D. Perception
- 

**12. The core principle of User-Centered Design (UCD) is that aesthetic appeal should always prioritize user needs.**

- ☐ A. True
  - ☐ B. False
- 

**13. Name two types of user-based evaluation methods.**

---

**14. The concept of user ..... refers to how users form an understanding of how a system works, which designers aim to align with for intuition.**

---

**15. Match the HCI field with its contribution to the discipline:**

- |                              |             |  |
|------------------------------|-------------|--|
| 1. Human factors engineering | <div></div> | A. Focuses on optimizing human well-being and system performance   |
| 2. Computer science          | <div></div> | B. Shapes the aesthetics and user experience of interfaces         |
| 3. Cognitive psychology      | <div></div> | C. Offers insights into human mental processes                     |
| 4. Design                    | <div></div> | D. Provides the technological capabilities and system architecture |
- 

**16. What is the primary benefit of accelerators, such as keyboard shortcuts, in an interface design?**

- ☐ A. They primarily aid in error prevention for novice users.
  - ☐ B. They improve consistency with real-world metaphors.
  - ☐ C. They enhance flexibility and efficiency for expert users.
  - ☐ D. They reduce system status visibility.
- 

**17. According to Nielsen's heuristics, matching the system to the real world means using highly technical, system-oriented terms for accuracy.**

- ☐ A. True
  - ☐ B. False
- 

**18. What is 'usability' in the context of Human-Computer Interaction?**

---

**19.** A ..... walkthrough is an expert-based evaluation method where experts simulate a user's step-by-step interaction to assess learnability.

---

**20.** The user-centered design stage that involves understanding who the users are, their tasks, and the environment is known as which of the following?

- ☐ A. Summative evaluation
  - ☐ B. Requirement specification
  - ☐ C. Design solutions
  - ☐ D. Context of use analysis
-