# CAT 2

## Question 1

Define Goals start with clear objectives What aspects of the user interface do you want to evaluate? Are you focusing on usability, learnability, or user satisfaction?

User-Centered Approach-Recruit representative users’ participants that reflect your target based on terms of skills and experience level.

Focus on user behaviour Observe how users interact with the interface. Use techniques like think-aloud protocols to understand their thought processes and challenges.

Control and Manipulation check the aspect of user interface are you manipulating and the user behaviour towards the manipulation. Also include a control group that experiences the existing user interface for comparison.

Experiment Design consider different approaches depending on your goals and randomly assign user different conditions to ensure generalizability of find.

Data Analysis and Interpretation combine quantitative data with qualitative data for richer understanding. look for consistent patterns in user behaviour across different data source to draw meaningful conclusion.

## Question 2

Consider Color Blindness: Be mindful of different types of color blindness. Use color combinations that are distinguishable even for people with limited color vision.

Clarity and Readability Foreground text and essential UI elements should have sufficient contrast against the background for optimal readability. Avoid light text on light backgrounds or vice versa.

Cultural Considerations: Be aware that color meanings can vary across cultures. Research cultural associations with colors to avoid unintentional messages.

Maintain a Color Scheme Establish a consistent color palette and use it throughout your UI for a cohesive and recognizable brand identity.

Use Color for Emphasis Highlight important elements like buttons or calls to action with color but avoid overusing it for emphasis.

## Question 3

## **Developer refines the system Based on the feedback, the developer identifies areas for improvement and makes changes to the design, features, or overall concept.**

## **Early Feedback Prototyping allows gathering valuable feedback early in the development cycle. This help identify potential problems and avoid costly mistakes later on.**

## **Improved Communication Prototypes provide a tangible representation of the system, fostering better communication between developers and customers/users. It helps everyone visualize the final product.**

## **Iterative Design The prototyping process is iterative, allowing for ongoing refinement based on feedback. This leads to a more user-centered and effective final product.**

## Question 4

Conciseness A good metaphor is concise and to the point, conveying the essence of the abstract concept in a succinct manner. It avoids unnecessary complexity or verbosity, ensuring clarity and impact.

Memorability An effective metaphor leaves a lasting impression on the audience, making the abstract concept more memorable and easier to recall. It should have a distinctive quality that sticks in the audience's mind.

Appropriateness A successful metaphor is appropriate for the context and the audience's cultural background, values, and beliefs. It should resonate with the audience and align with the tone and purpose of the communication.

Creativity A strong metaphor demonstrates creativity and originality in its formulation and expression. It should offer a fresh perspective or insight into the abstract concept, sparking the audience's imagination and curiosity.

Flexibility A good metaphor can be adapted and applied in various contexts and situations, allowing for versatility in communication. It should have the flexibility to resonate with different audiences and convey different nuances of the abstract concept.

## Question 5

**Similarities** **Reduce Complexity:** Both metaphors simplify complex concepts by relating them to familiar experiences. This makes new systems easier to understand and learn. **Improve Usability:** By tapping into existing knowledge, metaphors can make UIs more intuitive and user-friendly, leading to faster adoption and fewer errors.

**Differences**

1. **Form**

Composite Metaphor This is a visual metaphor. The entire UI design itself embodies a familiar concept, using its layout and elements to represent real-world objects or actions.

Verbal Metaphor **T**his is a linguistic metaphor. It uses words or phrases to describe the system or its features in terms of something familiar.

**2. Scope**

Composite Metaphor Typically defines the overall structure and organization of the entire UI. It provides a broad framework for users to understand how to interact with the system.

Verbal Metaphor Often focuses on specific functionalities or features within the UI. It provides targeted explanations for individual elements or actions.

**3. Flexibility**

Composite Metaphor Less flexible. Once established, the entire UI design needs to adhere to the chosen metaphor for consistency.

Verbal Metaphor More flexible. Different verbal metaphors can be used within the same UI to explain various functionalities without compromising the overall design.

## Question 6

Goals of HCI

Usability HCI strives to create computer systems that are easy to learn and use for people with varying levels of experience and abilities. This includes considerations for accessibility for users with disabilities.

Efficiency The design should allow users to complete tasks quickly and effectively, minimizing wasted time and effort.

User Satisfaction HCI aims to create enjoyable and rewarding user experiences. Users should feel comfortable and in control when interacting with the system.

Utility: The system should fulfill the user's needs and goals. HCI ensures that the features and functionalities offered are relevant and valuable to the target user base.

Key Concerns of HCI:

User-Centered Design This core principle emphasizes understanding user needs, behaviours, and limitations throughout the design process. HCI focuses on designing systems that cater to the user.

Evaluation and Iteration Effective HCI involves ongoing evaluation of the system through usability testing, user feedback, and data analysis. This feedback loop allows designers to identify and address usability issues, leading to iterative improvements.

Accessibility HCI considers the diverse needs of users, including those with physical, sensory, or cognitive impairments. The goal is to ensure that everyone has equal access to and can interact with the system effectively.

Social and Ethical Implications HCI acknowledges the broader impact of technology on society and human behaviour. It considers the potential for social exclusion, privacy concerns, and addiction associated with certain technologies. The goal is to design systems that are ethically sound and contribute positively to society.