Q: What is HCI? Why HCI is important?

A: HCI stands for Human-Computer Interaction. It studies how people interact with computers and designs systems that are user-friendly. It is important because it improves usability, efficiency, and user satisfaction in technology.

Q: Write note on-HCI is multidisciplinary.

A: HCI combines computer science, psychology, design, and cognitive science. It brings together these fields to design systems that are efficient, easy to use, and match human behavior.

Q: What are the goals of HCI?

A: The main goals are to improve usability, make systems more efficient, reduce errors, and enhance user satisfaction while interacting with technology.

Q: Write 7 stages of action and 3 level of processing in psychology.

A: The 7 stages of action are: form goal, plan, specify, perform, perceive, interpret, and evaluate. The 3 levels of processing are visceral (automatic response), behavioral (routine actions), and reflective (conscious thinking).

Q: Write note on UCD.

A: User-Centered Design (UCD) focuses on designing systems by involving users in every stage. It ensures the product meets real user needs and is easy to use.

Q: What are the Principles of HCI?

A: The key principles are consistency, feedback, error prevention, flexibility, visibility, and simplicity. These help make interfaces more intuitive.

Q: Write note on-HCI benefits and Functionality

A: HCI improves productivity, reduces learning time, and helps users complete tasks effectively. It also increases user comfort and reduces frustration.

Q: Identify good design and bad design.

A: A good design is simple, consistent, and provides feedback (e.g., Google homepage). A bad design confuses users and lacks clarity (e.g., complex TV remotes).

Q: Write note on Input/Output channel.

A: Input/output channels are the ways humans and computers communicate. Input includes keyboard, mouse, and speech; output includes screens, sound, and vibration feedback.

Q: What is Human Memory?

A: Human memory stores and retrieves information. It includes sensory memory, short-term memory (for quick use), and long-term memory (for permanent storage).

Q: Write note on-Ergonomics.

A: Ergonomics is designing systems and workplaces for human comfort and efficiency. It reduces fatigue, increases productivity, and prevents strain or injury.

Q: What are the types of Human Memory?

A: The three types are sensory memory (temporary), short-term memory (limited capacity), and long-term memory (stores knowledge permanently).

Q: What are Models of Interaction?

A: Models of interaction describe how users and systems communicate. Example: Norman’s model shows user goals, actions, and system feedback.

Q: Write short note on-Long Term Memory

A: Long-term memory stores experiences, skills, and knowledge permanently. It helps users remember how to use software or systems over time.

Q: What is interaction? Principles of Interaction

A: Interaction is the process where a user and computer exchange information. Principles include feedback, consistency, error prevention, and simplicity.

Q: What are Interaction Styles?

A: Interaction styles are ways users communicate with systems, such as command line, menus, forms, direct manipulation, and natural language.

Q: What are Paradigms of Interaction?

A: Paradigms of interaction are approaches like WIMP (Windows, Icons, Menus, Pointer), ubiquitous computing, and virtual reality.

Q: Write note on-User Experience

A: User experience (UX) means how a person feels while using a product. Good UX makes systems enjoyable, efficient, and meaningful to use.

Q: Explain HTA.

A: Hierarchical Task Analysis (HTA) breaks tasks into smaller subtasks. It helps understand user goals, workflow, and system design requirements.

Q: Write note on-Goal and task hierarchical model

A: This model organizes user goals and divides them into subtasks. It helps designers understand how users complete complex tasks step by step.

Q: What is interaction design with user profiles.

A: Interaction design focuses on how users interact with systems. User profiles describe target users, their needs, and behavior to guide better design.

Q: Write note on-Diagrammatic Dialog Design.

A: It uses diagrams to represent system dialogs and interactions between users and computers, helping designers visualize communication flow.

Q: Write note on-Design standards and design guidelines

A: Design standards are formal rules that ensure consistency; guidelines are flexible suggestions to improve design quality and usability.

Q: What is software design process?

A: It includes stages like requirement analysis, design, implementation, testing, and maintenance to ensure a functional and usable system.

Q: Write note on-Scenarios, Navigation Design, Screen Design

A: Scenarios describe user situations, navigation design defines how users move through the system, and screen design creates visual layouts for interaction.

Q: What is Prototyping and Wire-framing

A: Prototyping creates a working model to test functionality; wireframing shows basic structure and layout without detailed design.

Q: Write note on-MVC.

A: MVC (Model-View-Controller) separates data (Model), interface (View), and logic (Controller) for easier development and maintenance.

Q: Write note on – UIMS

A: User Interface Management System (UIMS) handles communication between the user and the system interface, managing input and output efficiently.

Q: What are the goals of interaction? Explain Cognitive walk through.

A: The goals are to make interaction simple and effective. Cognitive walkthrough tests system usability by stepping through user tasks and predicting difficulties.

Q: Write note on – DECIDE framework.

A: DECIDE helps plan evaluation: Define goals, Explore questions, Choose methods, Identify issues, Decide practicals, and Evaluate results.

Q: What is Usability Testing?

A: Usability testing observes real users using the system to find problems and improve design quality.

Q: How will you perform usability testing on interactive interface?

A: Select real users, give them tasks, observe their actions, record difficulties, and collect feedback to make improvements.

Q: Explain Design Thinking with any example

A: Design thinking is a user-centered approach that solves problems creatively. Example: redesigning an ATM to make it faster and easier to use.

Q: Write note on- Augmented Reality

A: AR overlays digital content (like images or data) on the real world using devices like phones or AR glasses.

Q: Write note on- Virtual Reality

A: VR creates a fully immersive digital environment where users can interact using headsets and controllers.

Q: Discuss Challenges faced by designer while designing interfaces for smart homes and smart devices

A: Designers face challenges like limited screen space, power constraints, privacy, network issues, and ensuring ease of use for all age groups.

Q: Write note on-Future of HCI.

A: Future HCI trends include AI, gesture control, brain-computer interfaces, and immersive technologies like AR and VR for better human interaction.