**ALOYCE DACHE – AIIM/00759/2022**

**TECHNICAL UNIVERSITY OF KENYA**

**BSc. INFORMATION SCIENCE**

**HUMAN COMPUTER INTERCTION – AIIQ3123**

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**CAT 2**

**Questions**

1. **Describe any five advantages of Graphical User Interface over other forms of HCI.**
2. **Describe any two emerging HCI styles.**
3. **Explain four rules of user interface design.**
4. **Explain how you can achieve ‘usability’ in HCI design for any five categories of users.**
5. Describe any five advantages of Graphical User Interface over other forms of HCI
6. GUI has reduced error rates since it has clear elements which provide confirmation prompts and indicate actions clearly.
7. GUI is easy to understand and learn since it has visual elements like icons and buttons which allow users to navigate and perform tasks.
8. GUI has enhanced engagement that improves user satisfaction due to attractive visuals and interactive elements.
9. GUI provides real-time feedback on user actions due to presence of visual cues i.e changing button appearance or highlighting.
10. GUI allows for diverse interaction methods by utilizing multiple input devices like mouse, keyboard and touchscreens.
11. Describe any two emerging HCI styles**.**
12. Brain Machine Interface – this interface enables direct communication path between the brain and machine to be used.

This interface allows transmission of signals directly to someone’s brain to allow them to see, hear or feel specific sensory inputs.

1. Social and collaborative Interaction – it focusses on designing interfaces that support social interaction and collaboration among users.

It may include social media platforms and online communities.

1. Explain four rules of user interface design.
2. Avoid errors – the interface should be designed to minimize the risk of errors by issuing clear instructions, constraint inputs and ease in undoing actions.
3. Offer informative feedback – the interface should provide clear and timely feedback to the users about their actions.
4. Consistency – interface should be consistent in their layout, action sequence and terminologies to enable easy learning.
5. Support internal locus of control – users should feel in control of the system by the interface being responsive, predictable and accomplishing.
6. Explain how you can achieve usability in HCI design for any five categories of users.
7. Understand user group – clearly define the five categories of users based on factors like age, technical proficiency, disabilities and primary goals within the system.

Also do research to determine user group’s needs, pain points and preferred interaction styles by users.

1. Learnability – the interface should be simple, with consistency and familiar patterns across user groups.
2. Efficiency – the interface should allow for personalization an customization to suit individual user preferences.
3. Error prevention – the interface should have clear error messages with constructive guidance on how to correct the mistakes.
4. Memorability – the interface should have consistent visual language and branding elements across the system to avoid confussion.