



PART A

Answer ALL the questions

$5 \times 4 = 20$

1. A team is designing a mobile banking app for senior citizens. A software tester asks, "What is interaction design and why is it so important for our savings dashboard?". Frame interaction design for this context.
2. As you are developing a prototype of the claim's submission portal on an insurance website, your manager says to you, "This page needs to satisfy 2 basic usability goals". List any two usability goals of an interactive product.
3. Your team is comparing a new mobile heart-health monitoring application for cardiac patients. You are comparing the patient report download flow in your AI tool against the same feature in a competing tool. Yours is fast and clear, but the competitor tool takes several confusing steps. Identify which is the good design and which is the poor design, and why.
4. In redesigning an ATM interface that requires a long series of steps before a transaction is authorized, why might recognition-based signals be more useful than recall in this context?
5. A new web-based tax-filing system shows dozens of advanced options on the home page. Many new users are abandoning it halfway. Which "training-wheels" style design could be a good approach?

Answer ALL the questions

6. In terms of usability within interaction design, particularly in the context of Air Ticket Booking Software, several fundamental design principles are essential for achieving user satisfaction and operational efficiency.

Discuss the primary design principles for usability in interaction design, which include Visibility, Feedback, Constraints, Mapping, Consistency, and Affordances. Illustrate each principle with examples from well-designed and poorly designed booking interfaces.

7. As the team Leader, you are leading the design of the mortgage approvals dashboard for a national bank. In the context of UX (User Experience) design principles, the Head of Product asks you: *"Can you explain and contrast usability goals and user experience goals for our platform?"*

- i. Describe those two sets of goals in banking (speed and accuracy for usability, customer confidence and satisfaction for UX).
- ii. Discuss some trade-offs (safety confirmation processes can cause a slowdown in workflow processes but minimize errors).

8. Your bank is seeking to redesign its Phone Banking Security Process. Currently, customers are required to remember multiple personal details and identify specific letters from their passwords during random questioning, which many find stressful and difficult. As the designer:

- i. Identify areas of cognitive load (memory load, difference between recognition and recall, and attention).
- ii. Suggest design changes in this task that will still provide security while reducing cognitive demand on memory.
- iii. Justify your suggestions using some principles of attention, perception, and memory.



PART A

Answer any Five Questions

5x4=20

1. Analyze this interaction in terms of sequence organization and preference:

Sara: "Hey Tom, about the last instruction for the essay on 'synthesizing interdisciplinary perspectives' -- what does that mean?"

Tom: "Oh, that part? I think it just means we need to bring in ideas from different subjects, not focus on just one. So, if it's a history essay, we could include some sociology or economics, but in a way that connects them."

2. Explore two fascinating ways in which coordinating systems utilize nonverbal communication to convey messages effectively.

3. How does the university's design team enhance its student site by utilizing multiple data gathering techniques, categorizing user feedback, and applying analysis tools to prioritize improvements?

4. Illustrate the key characteristics of the interaction design process.

5. You are on the phone with your friend, having a conversation. Due to the increased likelihood of mobile network failures, you suddenly run into a breakdown in the conversion. What mechanism do you apply to repair the breakdown?

6. A company is designing a self-service kiosk for customers to place food orders in a busy restaurant. They break down the ordering process into steps such as selecting items, customizing

orders, reviewing the bill, and making payments. They also note the time taken for each step and common user errors. How do task descriptions and task analysis help in designing a user-friendly interface?

PART B

Answer any Three Questions

$3 \times 10 = 30$

7. A global corporation is developing a platform for cross-time zone collaboration for hybrid teams. The design team, which includes shadowing team members, participates in online meetings and engages in casual exchanges, such as chats and shared documents. How the ethnographic studies and social mechanisms are essential for designing effective collaborative systems.
8. Explain with suitable examples the three types of classification for Computer Mediated Communication (CMC), with their distinct characteristics, benefits and drawbacks.
9. Design a conceptual framework for creating a mobile banking application for customers of varying levels of digital competence. To help clients connect with the system, they use metaphors such as "virtual teller" and "digital wallet." Also established core user functions, including examining transaction history, transferring money, and checking balances.
10. Show how various lifecycle models influence product development. Assume you are a member of a startup building a new mobile app to assist customers in measuring their daily water intake and establishing hydration targets. Your team must decide which life cycle model will best lead the development process, taking into account the iterative nature of user feedback and the need for detailed human-computer interaction (HCI).



PART A

Answer any Four Questions

4x5=20

1. A hospital IT team is creating a digital communication device for non-verbal patients. Describe how scenario-based prototyping contributes to ensuring this device addresses the requirements of patients, and explain why low-fidelity prototypes are preferred during the early phases of design.
2. In-vehicle navigation system, during initial user evaluations, two situations are investigated. Examine how the positive and negative scenarios can impact physical and conceptual design choices, and explain the importance of utilizing scenario feedback for iterative enhancements.
3. A government agency is modernizing its service request management system through digitization. Provide PICTIVE and CARD methods to maximize user contribution and meaningful engagement during participatory design workshops.
4. A retail business creates a prototype for a new self-service checkout kiosk. Identify one usability challenge revealed by this situation, and recommend two methods the design team could implement user-centred principles to enhance the kiosk for all users.
5. A mobile banking application has launched a feature that allows users to establish spending limits and get alerts. How can the team effectively implement strategies to reconcile user needs based on feedback from analysing differing design scenarios?

PART B

Answer any Two Questions

2x10=20

6. A start-up is designing a wearable device for older adults to track medication and provide reminders. The team creates basic screens and a cardboard prototype, then tests it with seniors through role-play. Participants express uncertainty about button icons, suggest larger displays, and explore custom reminders for irregular prescriptions. As the lead interaction designer, analyse how you would use user-generated scenarios and low-fidelity prototypes to iteratively refine both conceptual and physical design. Identify challenges likely to occur at both the prototyping and implementation phases.

7. You are redesigning the interface of a city-wide bike rental system due to user frustrations with unclear menus, system errors, and difficulty in locating bikes. To address these issues, you organize a participatory design workshop with stakeholders like students, tourists, and urban planners. Evaluate how scenario-based participatory design uncovers issues not identified by conventional requirements gathering. Describe a method for prototyping, testing, and iteratively improving kiosk and app interfaces through scenario walkthroughs and stakeholder feedback.
8. A financial services company is developing a user-centred internal communication and task management system. While some users suggest innovative workflow solutions, others are hesitant to move beyond familiar practices and worry about losing established communication shortcuts. They observe employees in their work environment and conduct contextual interviews. How does combining ethnographic observation, contextual design, and workshops using methods like PICTIVE and CARD help in system development?

PART C

Compulsory Question

1x10=10

9. A university is designing a new digital platform to support both students and faculty in organizing coursework, submitting assignments, and accessing real-time feedback. After initial requirement gathering and low-fidelity sketches, the team builds a high-fidelity clickable prototype with realistic interactions and visual design. They commit to a user-centred approach—actively involving students and faculty in all design stages. To plan the evaluation of this prototype, the team decides to use the DECIDE framework.
 - i. How would you conduct a thorough evaluation of the high-fidelity prototype using the DECIDE framework?
 - ii. Describe how you would determine appropriate evaluation goals and stakeholder questions.
 - iii. Identify key practical and ethical issues.
 - iv. Explain your approach to collecting, interpreting, and presenting the evaluation data.
 - v. And provide at least two concrete examples of how user involvement at each stage can improve the final product.