



United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

Mid Exam :: Spring 2024

CSE 4451: Human Computer Interaction

Total Marks: 20 Duration: 1 hours 30 minutes

Answer all the questions. Figures in the right-hand margin indicate full marks.

Any examinee found adopting unfair means will be expelled from the trimester / program as per UIU disciplinary rules.

You MUST answer all parts of the same question altogether

- 1 **Ethnography** is a qualitative research method that involves the systematic study and observation of people and cultures within their natural environment. Now, describe **two example research contexts** where Ethnography can be applied and mention why applying Ethnography would be suitable in those contexts. /5/

- 2 In Dhaka metropolitan city, the city corporation is looking to revamp its public transportation ticketing system to improve efficiency, accessibility, and user experience. The existing system is outdated, leading to long queues, confusion among commuters, and inefficiencies in fare collection. The city corporation plans to conduct a **contextual inquiry**. You are asked to design a study plan for contextual inquiry while answering the following questions: /5/
 - a. Who will be the **actors** for the contextual inquiry? Why do you plan to observe these actors?
 - b. How do you plan to conduct the contextual inquiry? For instance, which **activities** of the actors are you planning to observe in the real context?
 - c. **Where** and **when** do you plan to observe the actors?

- 3 a. Consider three persons: Jonas, Martha, Robert. [2.5
+
2.5]
Jonas has Math exam today. If Jonas attends any math exam, then he brings calculator with him. Now, Robert has heard that Jonas has math exam today. So, he concluded that Jonas has brought calculator today. Now, Martha saw Jonas is carrying calculator while attending the exam. So, she concluded that every student in the class carries a calculator during the exam. Now, mention the types of Reasoning of Robert and Martha are having and justify your answer.
- b. Consider, we are designing a CAPTCHA for our website. Now, a developer has deployed the following system for a CAPTCHA:
The user will be given four cards where each card will have alphabet on one side and the number on another side. Now, the user has to select proper cards to validate the following claim: “If a card has a vowel on one side it has an even number on the other”. The user will be able to access the website only when they select the proper card. Now, the website owner has noticed that very few users are able to access the website for some reason. Now, describe the reason in terms of Wason’s card experiment.
- 4 Consider the following scenario describing Busy Professional Balancing Work, Family, and Personal Well-being of a woman named Emily: [5]

Emily graduated with a bachelor's degree in marketing from a prestigious university and has been working in the tech industry for over a decade. She is married with two young children, ages 5 and 7. She is ambitious and driven, always seeking new challenges and opportunities for growth in her career. However, she also prioritizes her family life and strives to be present for her children's milestones and activities.

Emily's day typically begins early, around 6:30 AM, as she prepares breakfast for her family and helps get her children ready for school. After dropping her kids off at school, Emily commutes to the office, where she spends the majority of her day in meetings, brainstorming sessions, and project management tasks. She works collaboratively with her team to develop marketing strategies, analyze market trends, and launch new campaigns. Emily leaves work around 5:30 PM to pick up her children from school and daycare. She often multitasks, catching up on work calls during her commute or responding to urgent emails while waiting in the school pickup line. Once home, Emily shifts her focus to family time, helping her children with homework, preparing dinner, and spending quality time together as a family. She values these moments of connection and tries to limit distractions from work during this time. After putting her children to bed, Emily sets aside time for self-care activities, such as yoga, reading, or catching up on her favorite TV shows. She cherishes these quiet moments to recharge and unwind before starting the cycle all over again.

Create a **user persona** for Emily reflecting her **needs, challenges, abilities, and preferences** (use a rectangular box for the persona’s image).