1. Please fill in the blanks: (2 points) The goals of interaction design involves: a. Developing _____ products, b. Involve _____ in the design process.

2. Name 2 academic disciplines contributing to Interaction Design (each answer can be a phrase or a word): (2 points)

      1. _____. 2. _____.

3. What are the four iterative processes involved in Interaction Design: (4 points)

      1. _____ 2. _____

      3. _____ 4. _____

      4. _____

4. Refers to the usability goal of how a product supports users in carrying out tasks – (1 pt)

      a. Effectiveness.

      b. Efficiency.

      c. Safety.

      d. Utility.

      e. Learnability.

5. Refers to the extent to which the product provides the right kind of functionality so that users can do what they need or want to do – (1 pt)

      a. Effectiveness.

      b. Efficiency.

      c. Safety.

      d. Utility.

      e. Learnability.

6. In the text area below, please provide one desirable user experience goal as specified in Interaction Design chapter 1: (1 pt)

7. In the text area below, please provide one undesirable user experience goal as specified in Interaction Design chapter 1: (1 pt) ⍰

8. In the text area below, please provide the name of the design principle that refers to designing interfaces to have similar operations and use similar elements for similar tasks. For example, similar keyboard shortcuts for copying, saving and opening. (1 pt) ⍰

9. In the text area below, please provide the name of the design principle that refers to how physical and virtual attributes of an object allows for users to know how to use them. For example, a scroll bar invites moving up and down, icons invite clicking. (1 pt) ⍰

10. In the text area below, please provide the name of the design principle that refers to restricting the possible actions that can be performed with the system in order to help users from selecting incorrect options. For example, an HDMI cable only fitting an HDMI port and not any other port options. (1 pt) ⍰

2

1. Viewers will pay high prices for increased quality of viewing in next generation TV screens in home entertainment systems. In the text area below, please state if this is an assumption or a claim. ⍰

2. Curved high definition TV screens will provide a high quality viewing experience for large groups of people from different vantage points in the living room. In the text area below, please state if this is an assumption or a claim.

⍰

3. _____ is a high level description of how a system is organized and operates, and it helps designers to straighten out their thinking before they start laying out their (interface) widgets. In the text area below, please state the term that fits in the blank space.

⍰

4. _____ are intended to provide familiar entities that enable people to readily understand the underlying conceptual model, and know what to do with the system. They are often visualizations of an operation, for example, an icon of a shopping card for placing items or the desktop system. In the text area below, please state the term that fits in the blank space.

⍰ 5. Commands such as tell the time, print a file, select and replace words in a document, save a file are examples of _____ interaction type. In the text area below, please state the term that fits in the blank space.

⍰

6. A large screen display system with an interactive virtual human in a shopping complex that provides recommendations regarding where to purchase various household goods via social dialogue is an example of _____ interaction type. In the text area below, please state the term that fits the blank space.

⍰

7. A virtual reality system that is designed to provide an immersive experience of an unfamiliar space is an example of a system that uses a _____ interaction type. In the text area below, please state the term that fits the blank space.

⍰

8. _____ is a general approach adopted by a computing community for carrying out research and development, examples of which include cloud computing, pervasive and ubiquitous computing. In the text area below, please state the term that fits the blank space.

⬚

9. Fitts's law is an example of a _____ that aims to predict users' movement time to select an icon as a function of target icon's width and distance. Fitts's law is abstracted from perceptual psychology and is intended for designers to predict users' selection performance and evaluate different interface layouts. In the text area below, please state the term that fits the blank space.

10. Autonomous and Connected Vehicles is a _____ that invites people to imagine what riding in vehicles will be like in the future, and provides a scenario of what

traveling on roadways will be like in 10-15 years. In the text area below, please state the term that fits the blank space. ⬚

3

1. _____ is a theory of cognition concerned with explaining how we interact with representations such as maps, notes, and diagrams. The main goal is to explicate the cognitive benefits of using different representations such as diaries, reminders and calendars for different cognitive activities and processes.

2. _____ is a theory of cognition concerned with the nature of cognitive phenomena across individuals, artefacts and internal and external representations. Information is represented and re-represented as it moves across individuals and through the array of artifacts that are used.

3. The gulf of _____ is the gap between users goals and the system, that is bridged by the user's intentions, action specification and by the system interface.

4. The gulf of _____ is the gap between the system and the user's goals, that is bridged by information provided by the system's interactive display that the user interprets to examine the result of the user's actions.

5. _____ is a cognitive process involved in selecting things to concentrate on at a point in time from the mass of stimuli surrounding us. It allows us to focus on information that is relevant to what we are doing.

6. _____ is the cognitive process of acquiring information from the world via different sense organs and transforming those experiences into objects, events, sound and tasks.

7. _____ is a cognitive process that involves two stages: encoding the information and then retrieving knowledge.

8. Please answer true or false: When it comes to the use of memory in human-computer interaction, command-based interfaces promote recognition over recall.

9. _____ are tools and devices that aid users in looking up information such as the names of contacts, books, words in other languages etc. Apps of this kind instantly help us find or remember music (e.g. Shazam) and other forms of media and information. Users are relying more and

more on these types of tools and devices to look up things, so much so that they are no longer committing facts and information to memory.

10. _____ are internal constructions of some aspect of the external world enabling predictions to be made of user's behavior with technology. They can be deep or shallow, and help users develop an understanding of a system through learning about and using it, and using these users make inferences about how to carry out tasks with the systems.

4

1. The _____ system was a shared space that allowed people miles apart to carry on conversations as if in the same room drinking coffee. The first system consisted of two lounge areas that were 50 miles apart, were connected with high bandwidth video channels and full duplex audio. Connecting them virtually was a 3 by 8 foot wide "picture-window", onto which video images of the people in the other room were projected. In the text area below, please state the name of the system.

2. _____ are a type of systems that allow users to inform others as opposed to being constantly monitored. They may provide information about shared objects and progress of collaborative tasks. Examples of systems include Babble, and online social networks. In the text area below, please state your answer.

3. _____ refers to methods that involves knowing who is around, what is happening and who is talking to whom. It combines direct observation and peripheral monitoring to keep people informed and updated on what is happening in the workplace and the world. In the text area below, please state the answer.

4. _____ conversations happen when people 'at a distance' converse with each other, and is facilitated by technologies such as email, videoconferencing, videophone and instant messaging. In the text area below, please state the type of conversation this is.

5. According to Sachs et al., phrases such as "uh-uh", "umm", "ahh" that are used as conversational signals to indicate that there may be more information to follow by the speaker, and are known as _____. In the text area below, please state the name for this type of phrases used in conversation.

6. _____ is defined as technologies designed to allow a person to feel as if they were present in the other location. The technology will involve projecting their body movements, actions, voice and facial expressions to the other location or person. In the text area below, please state the name of this type of technology.

7. The term used to describe the process or technology used to record everything in one's life and perpetually sharing and broadcasting this information is known as _____. Please state your answer in the text area below.

8. The _____ system is designed to help people who are under-participating in group meetings. Real-time feedback is provided via ambient displays (i.e. on a table top) that can provide visualization of the members of a group's input during discussion, in doing so can modify the group member's contributions to make them more equitable by fostering self and group regulation. In the text area below, please state the name of the system.

9. _____ is a system that synthesized the projected mirror reflections of people in different places onto a single screen, so that they appeared side by side in the same virtual space. Participants quickly became sensitized to the importance of virtual personal space, moving out of the way if they perceived they were overlapping someone else on the screen. In the text area below, please state the name of this system.

10. _____ is an effect that is produced when technology enables co-located groups to collaborate more effectively when working, learning and socializing, such that users perceive that they are working, learning or conversing with the other person in close proximity.

5

1. _____ degrees of freedom controllers allows users to control multiple degrees of freedom simultaneously. In the text area below please state the name of this type of controller.

2. _____ devices are stationary input devices and may have resistance built into them for re-centering function, example of which includes a joystick or trackball input device. In the text area below, please state the type of input device this is.

3. _____ devices are a type of spatial input devices that allow for free movement without resistance, and allow for direct manipulation in interactive systems. Examples include a mouse input device. In the text area below, please state the type of device in the previous statement.

4. _____ input devices like the virtual tool belt and interaction slippers have a physical analogue in the real world or popular culture. In the text area below, please state the type of device in the statement above.

5. _____ is a spatial travel interaction technique or input device that allows for virtual turning and real physical motion. In the text area below, please state one spatial travel interaction technique or input device, which we studied in this lecture, that fits the statement above.

6. _____ is a spatial travel interaction technique or input device that allows for real physical turning and virtual motion. In the text area below, please state one spatial travel technique or input device, which we studied in the lecture, that fits this description.

7. _____ is a defined as the motor component of spatial navigation. In the text area below, please state the answer. Answer: Travel

8. _____ is defined as the cognitive component of spatial navigation. In the text area below, please state the answer.

9. _____ is a type of spatial travel task to find a target/object whose position is known. In the text area below, state your answer.

10. _____ is a type of travel task to find a target/object whose position is not known. In the text area below, please state your answer.

Don't forget chapter 5 , lecture 7.