CS6008-HUMAN COMPUTER INTERACTION

Two Marks Question with Answers

Unit - I

1. What are the 5 major senses?

   Sight

   Hearing

   Touch

   Taste

   Smell

2. What are the effectors?

   Limbs

   Fingers

   Eyes

   Head

   Vocal system.

3. What are the two stages of vision

   the physical reception of the stimulus from outside world, and The processing and interpretation of that stimulus.

4. What are rods and cones?
   Rods are highly sensitive to light and therefore allow us to see under a low level of Illumination. : the rods have been active and are saturated by the suddenlight. The cones do not operate either as they are suppressed by the rods. We are therefore temporarily unable to see at all. Rods therefore dominate peripheral vision.

   Cones are the second type of receptor in the eye. They are less sensitive to light than the rods and can therefore tolerate more light. There are three types of cone, each sensitive to a different wavelength of light. This allows color vision. The eye has approximately 6 million cones, mainly concentrated on the fovea.

5. What is HCI? Human - Computer Interaction

6. What are the input and output channels of human?

   Input in human is mainly though the senses and out put through the motor control of the effectors. There are five major senses: Sight, Hearing, Touch, Taste, Smell.

   There are a number of effectors: Limbs, Fingers, Eyes, Head, Vocal system.

7. What is reading?
   There are several stages in the reading process. First, the visual pattern of the word on the page is perceived. It is then decoded with reference to an internal representation of language. The final stages of language processing include syntactic and semantic analysis and operate on phrases or sentences.

8. What is hearing?
   Provides information about environment:

   distances, directions, objects etc.

   Physical apparatus:

   a. outer ear   –   protects inner and amplifies sound

   b. middle ear   –   transmits sound waves as

                              vibrations to inner ear

   c. inner ear   –   chemical transmitters are released

                              and cause impulses in auditory
                              nerve

   d.   sound frequency

9. What is touch?
   Provides important feedback about environment. May be key sense for someone who is visually impaired. Stimulus received via receptors in the skin:

   a. thermoreceptors   – heat and cold

   b. nociceptors– pain

   c. mechanoreceptors   – pressure   (some instant, some continuous)

   Some areas more sensitive than others e.g. fingers.

   Kinethesis - awareness of body position affects comfort and performance.

10. What is sensory memory?

Buffers for stimuli received through senses

iconic memory: visual stimuli

echoic memory: aural stimuli

haptic memory: tactile stimuli

Examples

"sparkler" trail , stereo sound

11. What is long term memory? And mention its types Repository for all our knowledge
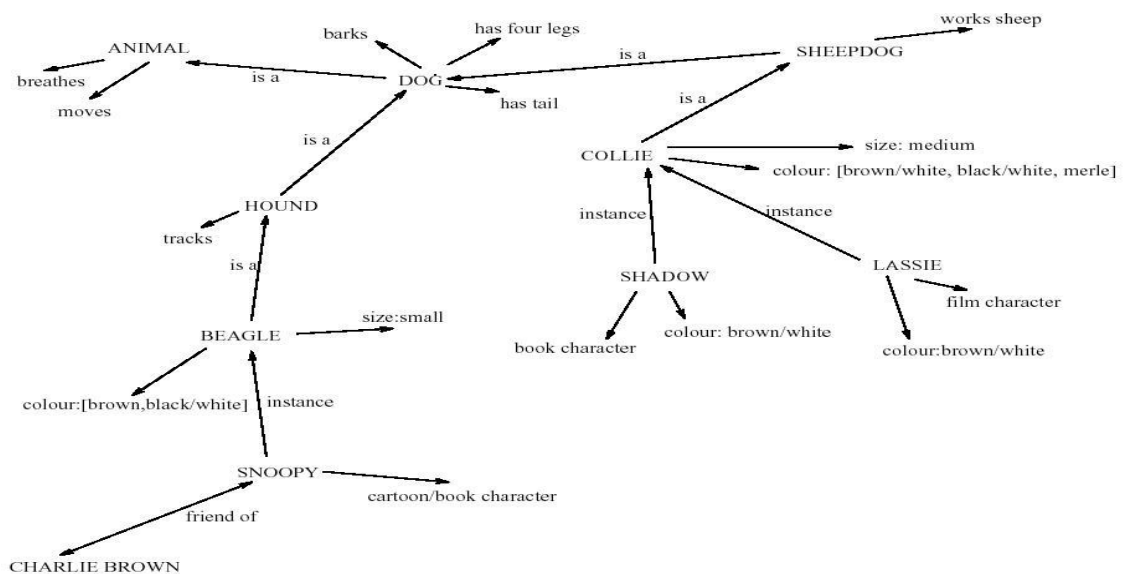
slow access ~ 1/10 second

slow decay, if any

huge or unlimited capacity

Two types

1. episodic– serial memory of events

2. semantic – structured memory of facts,concepts, skills semantic LTM derived from episodic LTM

12. Give example for Long term memory

13. What is semantic memory?
    Semantic memory structure

        provides access to information

        represents relationships between bits of information

        supports inference

14. What is forgetting?
    Decay- information is lost gradually but very slowly

    interference- new information replaces old: retroactive interference old may interfere
    with new: proactive inhibition

15. What is retrieval?
     recall -information reproduced from memory can be assisted by cues, e.g.
    categories, imagery

    recognition -information gives knowledge that it has been seen before less complex
    than recall - information is cue

16. What is deductive reasoning

        It is derive logically necessary conclusion from given premises.

            e.g.   If it is Friday then she will go to work

                It is Friday

                Therefore she will go to work.

1. Logical conclusion not necessarily true:
            e.g.   If it is raining then the ground is dry

                It is raining

Unit I to V

1 it has been observed that most computer users use menu option for input instead of keyboard accelerator. What is the reason behind it?

- Menu options are easier to find.
- You don't have to memories the keys for menu option but for key board accelerators you have to memories them

2 Define active intervention.

Active intervention with the participant and actively probes the participant understands
of whatever is being tested.

3 what is Ubiquitous Computing?

The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it. These words have inspired a new generation of researchers in the area of ubiquitous computing

4 which display device is very cheap and has fast enough response time for rapid animation with high color compatibility

The CRT is a cheap display device and has fast enough response times for rapid animation coupled with a high color capability

5 By breakdown Skelton plane into its component elements then how all piece fit together to

create this as whole user experience?

Beneath that surface is the skeleton of the site: the placement of buttons, tabs, photos, and blocks of text. The skeleton is designed to optimize the arrangement of these elements for maximum effect and efficiency

6 Explain Meta data in term of data processing

In data processing, meta-data is definitional data that provides information about or
documentation of other data managed within an application or environment

7 suppose you are a system analyst, with your work experience, briefly describe when it is useful to observe in contrast to observation process?

Being a system analyst, Early in design, observation helps designers understand users' needs. Other types of observation are done later to examine whether the developing prototype meets users' needs

8 Describe any five usability goals of Internet Explorer.

Usability is broken down into the following goals:

- Effective to use (effectiveness)
- Efficient to use (efficiency)
- Safe to use(safety)
- Have good utility (utility)
- Easy to learn (learnability)

Effectiveness
It is a very general goal and refers to how good a system at doing what it is suppose to do.

Efficiency
It refers to the way a system supports users in carrying out their tasks.

Safety
It involves protecting the users from dangerous conditions and undesirable situations. In relation to the first ergonomics aspect, it refers to the external conditions where people work.

Utility
It refers to the extent to which the system provides the right kind of functionality so that user can do what they need or want to do

Learnability
It refers to how easy a system is to learn to use. It is well known that people do not like spending a long time learning how to use a system

9 when observation is useful and how to observe?

Observing is useful at any time during product development. Early in design, observation helps designers understand users' needs.

The same basic data-collection tools are used for laboratory and field studies (i.e., direct observation, taking notes, collecting video, etc.) but the way in which they are used is different. In the laboratory the emphasis is on the details of what individuals do, while in the field the context is important and the focus is on how people interact with each other, the technology, and their environment. Furthermore, the equipment in the laboratory is usually set up in advance and is relatively static whereas in the field it usually must be moved around. In this section we discuss how to observe, and then examine the practicalities and compare data-collection tools.

10 Difference between Semi-structure interview and focus group interview.

Semi-Structure Interview	Focus Group Interview
Semi-structured, interviews combine features of structured and unstructured inter views and use both closed and open questions.	One form of group interview is the focus group that is frequently used in marketing, political campaigning, and social sciences research.
Use of pre-determined questions provides uniformity	Normally three to 10 people are involved.
Requires some level of training or practice in order to prevent interviewer suggesting answers	Focus groups are also attractive because they are low-cost, provide quick results, and can easily be scaled
It also allows respondents to discuss	to gather more data.
and raise issues that you may not have considered	A preset agenda is developed to guide the discussion

11 Differentiate between Visual Art and Visual Design?

Visual Art		Visual Design
Visual art is art such as paintings, photographs, sculptures, The term visual art separates those kinds of art from music, dance, and drama. It is two-dimensional. Visual arts are things like paintings, drawings, visual designs, photography, and computer art. There is no "designing" for a purpose;		Visual design is the way a piece of artwork, a room, yard, video game, photo or other artistic subject is composed and appeals to the human eye Photoshop designs for each page, page type, module within an app/site/software. Creates or contributes to style guides detailing how everything looks and

12 which theory claimed Problem solving is both productive and reproductive what are controlled vocabularies?

Gestat theory

Gestalt psychologists were answering the claim, made by behaviorists, that problem solving is a matter of reproducing known responses or trial and error. This explanation was considered by the Gestalt school to be insufficient to account for human problem solving behavior.

13 how active intervention technique performed?

Active intervention is particularly useful early in design. It is an excellent technique to use with prototypes, because it provides a wealth of diagnostic information. It is not the technique to use; however, if your primary concern is to measure time to complete tasks or to find out how often users will call the help desk. To do a useful active intervention test, you have to define your goals and concerns, plan the questions you will use as probes, and be careful not to bias participants by asking leading questions.

14 Application software implemented in file system model?

Software implemented in the file system model: Our software is already designed and built that way, and users are used to it neither of these arguments is valid. The first one is irrelevant because new programs written with a unified file model can freely coexist with the older implementation model applications. The underlying file system doesn't change at all. In much the same way that toolbars quickly invaded the interfaces of most applications in the last few years, the unified file model could also be implemented with similar success and user acclaim.

The second argument is more insidious, because its proponents place the user community in front of them like a shield. What's more, if you ask users themselves, they will reject the new solution because they abhor change, particularly when that change affects something they have already worked hard to master — like the file system. However, users are not always the best predictors of design successes, especially when the designs are different from anything they've already experienced,

15 explain metadata in term of data processing

In data processing, meta-data is definitional data that provides information about or documentation of other data managed within an application or environment.

For example:-

Meta-data would document data about data elements or attributes (name, size, data type, etc) and data about records or data structures (length, fields, columns, etc) and data about data (where it is located, how it is associated, ownership, etc.).

16 Point out the problem with Excise task?

The problem with excise tasks is that the effort we expend in doing them doesn't go directly towards accomplishing our goals. Where we can eliminate the need for excise tasks, we make the user more effective and productive and improve the usability of the software.

17 Define controlled vocabularies?

Vocabulary control comes in many shapes and sizes. At its most vague, a controlled vocabulary is any defined subset of natural language. At its simplest, a controlled vocabulary is a list of equivalent terms in the form of a synonym ring, or a list of preferred terms in the form of an authority file.

17 Write principles to prevent user privacy?

Most previous evaluations in human-computer interaction, these studies can be done without users knowing that they are being studied. This raises ethical concerns, chief among which are issues of privacy, confidentiality, informed consent, and appropriation of others' personal stories (Sharf, 1999).

People often say things online that they would not say face to face.

18 what is Scope Plane in context of elements of user experience?

On the software side, the strategy is translated into scope through the creation of functional specifications: a detailed description of the "feature set" of the product. On the information space side, scope takes the form of content requirements: a description of the various content elements that will be required. Now we can map that whole confusing array of terms into the model. By breaking each plane down into its component elements, we'll be able to take a closer look at how all the pieces fit together to create the whole user experience.

19 by breaking down Skeleton plane into its component elements then how all the pieces fit together to create this as a whole user experience?

The skeleton plane breaks down into three components.

On both sides, we must address information design:
The presentation of information in a way that facilitates understanding.

For software products:
The skeleton also includes interface design, or arranging interface elements to enable users to interact with the functionality of the system.

The interface for an information space is its navigation design:
The set of screen elements that allow the user to move through the information architecture

20 what "function" will create a copy of the original document in MS Word?

The word snapshot makes it clear that the copy is identical to the original, while also making it clear that the copy is not tied to the original in any way. That is, subsequent changes to the original will have no effect on the copy.