

HUMAN COMPUTER INTERACTION Marks (30)

ID: 14895

Name: Ussama Zahid

Q1:

a) What is the main aim of the Don Norman's Book (The Design of Everyday things)?

Ans:

- The Don Norman's book vision is to help the designers engineers and companies to move toward more human centered approach /products
- It also aim toward the visibility the basic principle the more visible and element is the more likely user will know about them and how to use them.
- It focus on the feedback of making it clear to the user that what action has been taken and what is been accomplished.
- It also aims on the constrains.
- Mapping.
- Consistency etc.

b) Explain Deductive and Abductive reasoning with examples.

Ans:

1. Deductive Reasoning:

It is a type of argument in which premises support the conclusion with certainty necessity or conclusiveness.

Example:

1. All cats have a keen smell. Fluffy is a cat, so Fluffy has a keen sense of smell.

2. Abductive Reasoning:

It is a logical assumption, explanation, inference , conclusion , hypothesis or best guess from an observation.

Example:

The Advance Beginner Nurse:

2. The baby is crying.
Babies cry when they are hungry.
This baby eats every 3 hours.
This baby is hungry.

Note: As nurses gain experience they can draw a hypothesis or conclusion using vast knowledge base Assessing patient condition by looking at both similarities.

Q2:

Analyze the following scenario and write down seven stages of action for given particular Scenario for solution.

Scenario is:

Suppose I want to go to University, but the tyre of my car got punctured. Now I have to repair it.

You are required to write the seven stages of Gulf of Execution and Evaluation to solve the scenario.

Ans: The following are seven stages to solve this scenario.

- 1. Forming a Goal.**
- 2. Forming the intention.**
- 3. Specifying an action.**
- 4. Executing the action.**
- 5. Perceiving the state of the world.**
- 6. Interpreting the state of the world.**
- 7. Evaluating the outcome.**

Solution:

Stage 1: Forming a Goal: what I want. I want to go to university but my tyre got punctured. Now I have to repair it.

Stage 2: Forming the intention: This would satisfy the goal. A repaired car would satisfy my goal of reaching the university.

Stage 3: Specifying an action: what I have to do to achieve the intention? I need to repair my tyre to meet the requirement set in my goal.

Stage 4: Executing the action: Here I would do the steps of the action to repair the car.

Stage 5: Perceiving the state of the world: gathering the information. My repaired car will be able to move to the university.

Stage 6: Interpreting the state of the world: what has changed. Punctured of my car tyre is repaired and now I can move.

Stage 7: Evaluating the outcome: Did I achieve my goal. Yes now I can go to university without worrying.

Q3:

- a) **Differentiate slip and mistake.**

Ans:

Slip:

A slip is when a user has the correct intentions but makes an error on accident is known as slip.

Causes: poor physical skills, inattention.

Mistake:

A mistake is when a user having the incorrect mental model.

Causes: incorrect understanding.

- b) **Explain self perception and object perception.**

Ans:

Self perception:

self-perception theory describe the method with In which people lacking initial attitude or emotional responses develop them by observing their own behavior and coming to the conclusion on what attitude must have driven that behavior.

Object perception:

Object-perception is a process by which people develop a view of the object they see.

Q4:

a) Write the steps involved in perceptual process.

Ans: The following are the steps:

1. The Environmental stimulus.
2. The Attended stimulus.
3. The image on the retina.
4. Transduction.
5. Neural processing.
6. Perception.
7. Recognition.
8. Action.

b) Differentiate between perception and recognition.

Ans:

Perception:

Perception is the way something is seen. Organization , identification of sensory information.

Example:

For example lets imagine that we were driving on the road at the perception stage you have become aware that there is something in the sky.

Recognition:

Recognition is to be recognized, acknowledged for something or condition of being recognized.

Example:

Now at the recognition stage of the perceptual process that we realize that there is plane in the sky.

Q5:

a) A graphic designer, wants to design a 3d shape using Adobe Illustrator, he select a shape, apply some gradient on it and then apply drop shadow effect. In the given scenario in the light of interaction identify the Goal, Problem domain and the task.

Ans:

Goal:

The goal of a graphic designer is to design a 3d shape.

Problem Domain:

The problem domain is that does the graphic designer has the skills to design a 3d shape does he/she has the knowledge about the 3d designing according to the requirements.

Task:

The following are the steps to take:

1. Open Adobe illustrator.
2. Go to menu bar in menu bar selects shapes.
3. Apply some gradient on that shape.
4. Apply drop shadow effect of that shape.

b) Explain Gulf of Execution and Gulf of Evaluation.

Ans:

Gulf of Execution:

- Does the system provide action according to the attention of the person?
- Gulf of execution is how well the system allows a person to do the intended actions directly without any extra effort.
- The actions that are provided by the system match those intended by the person?

Gulf of Evaluation:

- Does the physical representation provided by the system which can be directly perceived.
- Is that directly interpretable in terms of intentions and expectations of the person?
- The Gulf of evaluation reflects the amount of effort that the person must exert to interpret the physical state of the system and to determine how well the expectations and intentions have been met.