- Subject   :   Human Computer interaction
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- ID   #   14136
- Semester   : 6th
- Date   : 24/05/2020

Q.1:-

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

Ans: The main goal is to use the human-centered design to produce positive results that will enhance lives and make it joyous and pleasurable. The ultimate goal is to make a great product that customers will love.

(b): Explain Deductive and Abductive reasoning with examples.

Ans: DEDUCTIVE REASONING:-

Deductive reasoning, or deduction, is making an inference based on widely accepted facts or premises.

- **Example:**
- If it is Friday then he will go to work
- It is Friday
  Therefore he will go to work.

ABDUCTIVE REASONING:-

Abductive reasoning, or abduction, is making a probable conclusion from what you know.

- **Example:**

- Ground is wet, If it is raining.
- Ground is wet

   So, it is raining

★   ★   ★

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:- We are required to solve this problem by seven stages of action.

Stage 1 is Deciding the Goal:- This is what you want. As an example, I want to go to market, but the tyre of my car got punctured. Now I have to repair it.

Stage 2 is Intension to act:- This is what would satisfy the goal. A repaired car would satisfy my goal of reaching the market.

Stage 3 is Sequence of Actions:- What do I have to do to achieve the intention? I would need to repair a car to meet the requirement set in my goal.

Stage 4 is Executing of the Actions:- Here I would do the steps of the action. I would repair the car.

Stage 5 is Perceiving the State of the World:- Using the senses to gather information. My repaired car would be able to move to the market.

Stage 6 is Interpreting the State of the World:- What has changed? Punctured tyre of my car has been changed and it can move now.

Stage 7 is Evaluating the Outcome:- Did I achieve my goal? I can move towards market now without worrying. I achieved my goal.

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Q.3

(a): Differentiate between slip and mistake.

Ans: Slip:-

> A slip is when the user has the correct mental model of the interaction yet makes an error on accident. For instance, if two buttons are close together and you click one rather than the other on accident, that would be a slip.

- **Mistake:-**

  A mistake stems from the user having the incorrect mental model. That is precisely what happened to me. I did not accidentally press the Publish button; I intentionally pressed it but I had the wrong idea to what would happen.

- **Example:-** If the intention is not appropriate, this is a mistake. If the action is not what was intended, this is a slip.

(b):- Explain self perception and object perception.

Ans: self-perception:

Self perception is a process by which people develop a view of themselves.It is developed from social interaction within different groups.

Self-perception has three parts:

1. **Self-concept**
2. **Self-esteem**
3. **Self-presentation**

Example: :- a person who perceives himself or herself as interested in road biking may, as a result of that interest, buy bicycling equipment

and go on long cycling rides. That is, the person's attitudes and self-perception influence his or her behavior.

OBJECT PERCEPTION:-

Object perception is a process by which people develop a view of objects they see.

Example:-

Reversible Figure: Figure and ground that can be reversed

★   ★   ★
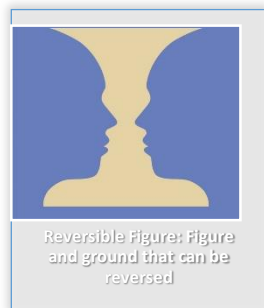
Q.4:-

(a): Write the steps involved in perceptual process.

Ans: The steps of perceptual process:-

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:-

Here, we actually perceive the stimulus object in the environment. It is at this point that we become consciously aware of the stimulus.

Example:

Let's consider our example, in which we imagined that you were out for a morning jog in the park. At the perception stage, you have become aware of that there is something out on the pond to perceive.

RECOGNITION:-

Perception doesn't just involve becoming consciously aware of the stimuli. It is also necessary for our brain to categorize and interpret what it is we are sensing.

Our ability to interpret and give meaning to the object is the next step, known as recognition.

Example:

It is at the recognition stage of the perceptual process that you realize that there is a duck floating on the water.

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Q.5:-

(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:- In the given scenario the Goal, Problem domain and Task are as follow:-

Goal:- Designing 3D shape is the goal in the given scenario.

Problem Domain:- Selecting and making of shape is the problem in the given scenarip.

Task:- The task is to selecting a shape, applying some gradient and applying drop shadow.

(b) Explain Gulf of Execution and Gulf of Evaluation.

Ans: GULF OF EXECUTION:-

Disparity between the user's perception of the required system interactions to achieve desired goal, and the actual system interaction required to achieve goal.

Example:- Online purchase

• Large gulf of execution: add item to cart, select checkout, enter shipping address, choose shipping options, enter billing address, enter payment details, accept/decline extra offers, review order, confirm order.

• Small gulf of execution: Amazon's 1-Click Ordering

GULF OF EVALUTION:-

Disparity between the user's perception (or discovery) of the system state, and the actual system state.

Example:- Copying a large number of files

• Large gulf of evaluation: hourglass, spinning pinwheel, no details

• Small gulf of evaluation: progress bar with listing of current file being copied, and estimated completion time

⭐ **THE END** ⭐