Human Computer Interaction

Name : Muhammad Abdullah Minhas

I.D : 13864

Teacher : Sir Shahab Ul Islam

Question no: 1

a) **What is the aim of the Don Norman's Book (The Design of every days thing)?**

Ans) One of the main premises of the book is that although people are often keen to blame themselves when objects appear to malfunction, it is not the fault of the user but rather the lack of intuitive guidance that should be present in the design.

Example

Flat plates on doors meant to be pushed, small finger-size push-buttons, and long and rounded bars we intuitively use as handles.

Aim

Basically the aim is that instead of giving manuals the things have such design that they don't need manuals.

B) Explain deductive and Abductive reasoning with examples.

Ans) <u>Deductive Reasoning</u>

Deduction is generally defined as "the deriving of a conclusion by reasoning. the formation of a conclusion based on generally accepted statements or facts.

<u>Example.</u>

You have a 10 o'clock appointment with the dentist and you know that it takes 30 minutes to drive from your house to the dentist's. From those two facts, you deduce that you will have to leave your house at 9:30, at the latest, to be at the dentist's on time

<u>Abductive Reasoning</u>

Abduction, is defined as "a syllogism in which the major premise is evident but the minor premise and therefore the conclusion only probable

Basically, it involves forming a conclusion from the information that is known.

<u>Example</u>

In an everyday scenario, you may be puzzled by a half-eaten sandwich on the kitchen counter. Abduction will lead you to the best explanation. Your reasoning might be that your teenage son made the sandwich and then saw that he was late for work. In a rush, he put the sandwich on the counter and left.

Question no: 2

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.

Steps

Stage 1 is Forming a Goal. This is what you want. I want to go to university, but the tyre of my car got punctured. Now I have to repair it.

Stage 2 is Forming the Intention. This is what would satisfy the goal. A repaired car would satisfy my goal of reaching the umiversity.

Stage 3 is Specifying an Action. 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 the Action. 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 university now without worrying. I achieved my goal.

Question no: 3

a)Differentiate between slip and mistake?

a) Mistake.

Some occur when people don't know what to do because they haven't learned or been taught to use something properly. These are what we call mistakes e.g sitting and waiting for table service at a pub where you are supposed to order at the bar

Slip.

when people do know what to do, in fact that may have successfully done this thing before many times, but they still make an error. These errors are called slips e.g accidentally typing a wrong word when you're writing a text, even though you know how to spell it, sometimes you'll still type it wrongly

b) Explain self perception and object perception

Ans) (a) **self perception**

Self-perception states that usually people learn and get the material from their attitudes and there original behavior and then they explain their own behavior.

(b) Object perception

Object perception is the process in which not tangible things like thinking or visual act is summarized or is well explained in perceptual awareness. It is upon our ability had how we will express our feelings that we have seen in that object

Question no : 4

a)Write all the steps involved in perceptual process?

Ans) Following are the steps in volved in perceptual process

Steps in the 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) Basically perception is the way something is seen. This means that how we look to things and how we feel them. How the things are seen and make an idea about that thing is known as perception. And recognition is to be recognized/acknowledged for something. And this means that how we will explain the idea or things which we have seen and recognized.

Question No: 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) **Domain**= Graphic designing

      Task = he selects a shape , apply some gradient on it and then applied drop shadow effect.

      Goal = wants to design a 3d shape using Adobe Illustrator .

B) Explain Gulf of Execution and Gulf of Evaluation?

Ans) <u>Gulf of Evaluation.</u>

The term of gulf of evaluation stands for the psychological gap that must be crossed to interpret a user interface display, following the steps: interface → perception → interpretation → evaluation.

<u>Gulf of Execution.</u>

The gulf of execution is the gap between a user's goal for action and the means to execute that goal