

HUMMAN COMUTER INTERACTION



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Q 01:-

(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 result that will enhance lives and make it beautiful and pleasurable. The ultimate goal is to make a great product that customer will love.

(b) Explain Deductive and Abductive reasoning with examples.

Ans:-

(i)Deductive reasoning:-

➔ General to particular

→ Derive logically necessary conclusion from given premises.

For example:- If it is Friday then he will go to work.

It is Friday.

Therefore he will go to work.

(ii) **Abductive reasoning:-**

→ reasoning from event to cause

For example:

Sam drives fast when drunk.

If I see Sam driving fast, assume drunk.

Logical conclusion not necessarily true:

For example: Ground is wet, If it is raining.

Ground is wet

So, it is raining

Q 02:-

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 have to use seven stages of action.

Stage 1 is Deciding the Goal:- This is what you want. As an example, I want to go to university, 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 university.

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 university.

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.

Q 03:-

(a) Differentiate slip and mistake.

Ans(a):- **Mistakes** are errors in choosing an objective or specifying a method of achieving it whereas where **slips** are errors in carrying out an intended method for reaching an objective.

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(b):- **Self perception:-**

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

Self perception has three parts

(i)Self-concept

(ii)Self-esteem

(iii)Self-presentation

Self-concept:- It refers to how someone thinks about or perceives themselves.

You see yourself as a LOVEABLE and WORTHWHILE person.

➔How others see you is not important .How you see yourself is important.

Self-esteem:-Emotion dimension of self perception. Positive and negative judgments people have of themselves. People with low self-esteem tend to be successful do not adapt well to stressful events.

Self-presentation:- Behavioral strategies people use to affect how others see them.

Goal of self presentation are affect other peoples impression to win their approval. Increase the persons influence in a situation.

Objet perception:-

Depth perception is the visual ability to perceive the world in three dimensions (3D) and the distance of an object. Depth perception arises from a variety of depth cues. Monocular cues include size, lines, color, visual angles and object placement.

The best example of these object perception is painting on canvas.

Depth through overlapping object. Depth through perspective.

Q 04:-

(a)Write the steps involved in perceptual process?

Ans:-Steps involved in perceptual process is given below:

- (1)The environmental stimuli
- (2)The attended stimuli
- (3)The image on the retina
- (4)Transduction
- (5)Neural processing
- (6)Perception
- (7)Recognition
- (8)Action

(b)Differentiate between perception and recognition.

Ans(b):- Differentiate between perception and recognition as given below

PERCEPTION: In perception we actually perceive the stimulus object in the environment . It is at this point that we become consciously aware of stimulus.

Lets consider our example in which we imagined that you were out for 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.

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

Q 05:

(a) A graphic designer, wants to design a 3d shape using Adobe Illustrator, he select ashape, 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 (a):- 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 scenario.

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 (b):- **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 evaluation:-

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