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SUBJECT        HCI  
DEP              BS (CS)

**Q1:**

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

Ans:

The Design of Everyday Things shows that good, usable design is possible. The rules are simple: make things visible, exploit natural relationships that couple function and control, and make intelligent use of constraints. The goal: guide the user effortlessly to the right action on the right control at the right time.

**b) Explain Deductive and Abdicative reasoning with examples.**

Ans:

**Deductive reasoning**

starts with the assertion of a general rule and proceeds from there to a guaranteed specific conclusion. General to particular.

Example: if it is Sunday then I will go for shopping

It's Sunday

Therefore, I will go for shopping.

### **abdlicative reasoning**

typically begins with an incomplete set of observations and proceeds to the likeliest possible explanation for the set and does its best with the information at hand, which often is incomplete. Reasoning from event to cause.

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:**

1. In the first stage we have to establish the goal. The goal here is that I have to reach to the university. but the tire of my car has got punctured so I have to repair the tire of my car hence the goal has established.
2. In the second stage I have to make intention for doing the task to that what would I do to make my goal satisfy. so I would have to repair my car's tyre this will satisfy my goal to reach university.
3. The third stage is for specifying an action that what I have to do achieve my goal my intention. I need to go tyre shop to repair my car's tyre to complete my requirement in my goal.
4. In the four stage, I have to execute the set of actions to achieve my goal. I would repair my car to reach the university.
5. In fifth stage we have to perceive the state of the system I have to use my senses together the information so when I repair my car so it will sense that my repaired car would work to be able to reach to the university.
6. In the second last stage we will interrupt the state of the system. That what has change? so the punctured tyre of my car has been repaired and now it is able to work properly and reach to the university.
7. In the last stage is to evaluate system state with respect to goal. I means did I have to achieved my goal? So my car now reaches to the university without any worries. So I achieved my goal.

**Q3:**

a) **Differentiate slip and mistake.**

Ans: **slip:**

is basically doing the right thing with good intention but failed to do it right.

**Mistake:**

when you're doing the project with wrong intention from the very start.

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

Ans: Self Perception:

Self-perception theory posits that people determine their attitudes and preferences by interpreting the meaning of their own behavior.

**Object perception:**

Object perception or object recognition is the process in which visual input is assigned a meaningful interpretation that is available to perceptual awareness.

**Q4:**

a) **Write the steps involved in perceptual process.**

Ans:

1. The perceptual process consists of six steps: the presence of objects, observation, selection, organization, interpretation, and response.

2. Perceptual selection is driven by internal (personality, motivation) and external (contrast, repetition) factors.

b) **Differentiate between perception and recognition.**

Ans:

**perception**

is organization, identification, and interpretation of sensory information Perception: It basically means the way in which something is regarded, understood, or interpreted. Since, images are perceived by humans, therefore it varies from human to human.

## **Recognition**

is the act of recognizing or the condition of being recognized. Recognition: In image processing object recognition is a method which helps to identify objects which are present in an image. It categorizes the objects, e.g. a dog present in an image can be recognized as a dog only.

**Q5:**

- a) **A graphic designer, wants to design a 3d shape using Adobe Illustrator, he selects 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 = wants to design a 3d shape using adobe illustrator.

Domain = Graphic designing.

Task = selects shape, apply some gradient, apply drop effect.

- b) **Explain Gulf of Execution and Gulf of Evaluation.**

Ans: :

**Then the gulf of execution begins:**

**having:**

Formulates intention

Specifies actions at interface

Executes action

**While gulf of evaluation begins at:**

Perceives system state

Interprets system state

Evaluates system state with repeat to goal.