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Subject : Human Computer Interaction

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Q No 8 → 01 Part (a)

⇒ a) Why we need to study HCI?

Ans :- HCI stands for Human Computer Interaction. HCI is primarily about solving problems and innovations. HCI students learn how to identify areas of improvement and then create better services and products. And if you can demonstrate these skills to a potential employer, then you will significantly raise your chances of standing out in highly competitive job markets.

Q No 8 → 01 Part (b)

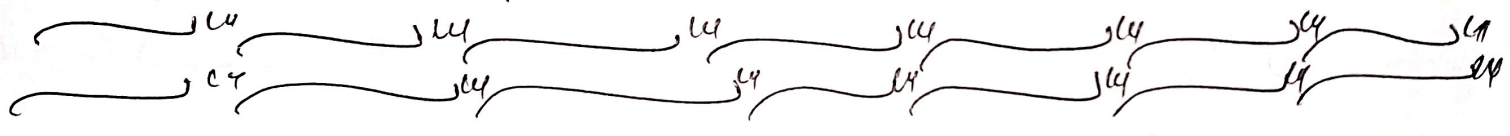
b) Briefly Explain the main goals of HCI?

Ans → The goals of HCI are to produce usable and safe system, as well as functional systems.

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In order to produce computer systems with good usability, developers must attempt to: --- develop tools and techniques to enable building suitable systems, achieve efficient, effective and safe interaction.

- Create usable software-enabled products and user-interfaces.
- Enhance the usability of existing products.
- Identify problems and tasks (such as in workplace) that can be addressed with software products.



Q No 8 → 02 Part (a) 8 →

a) Explain WYSIWYG.

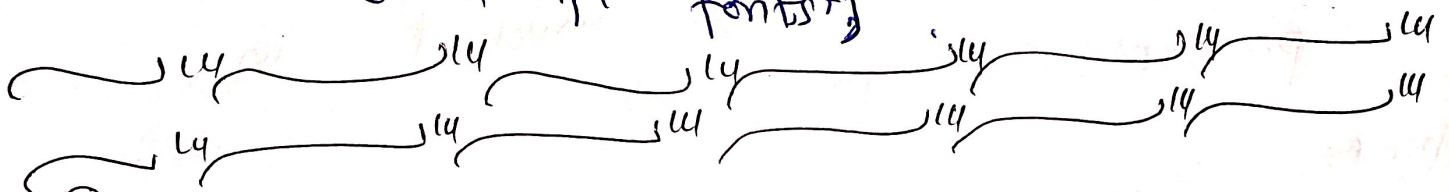
Ans → In computing, "What you see is what you get" is a system where editing software allows content to be edited in a form that resembles

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that resembles its appearance when printed or displayed as a finished product such as a printed document, web page, or slide presentation.

For Example ⇒

many desktop publishing systems print text using outline fonts (PostScript fonts)



Q 2:-

b) Differentiate between Perception and recognition?

Ans ⇒ Perception

Recognition

⇒ Perception is organization, identification, and interpretation of sensory information.

⇒ Recognition is the act of recognizing or the condition of being recognized.

• Conscious understanding of something.

• He looked at her for ten full minutes before recognition dawned.

• Vision (ability)

• An awareness that something observed has been observed before.

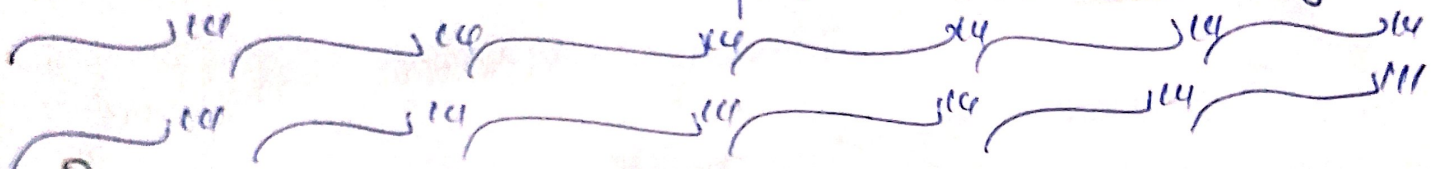
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Perception

- Acuity
- Cognition

Recognition

- Acceptance as valid or true.
- The law was a recognition of their civil rights.



Q2:-

c) Explain the steps involved in perceptual process?

Ans ⇒ Steps Involved In Perceptual Process ⇒

① The Environmental Stimulus ⇒

⇒ The environmental stimulus is everything in our environment that has the potential to be perceived.

② The Attended Stimulus ⇒

⇒ The attended stimulus is the specific objects in the environment on which our attention is focused.

5

### ③ The Image on Retina →

- ① The first part of these process involves the light actually passing through the cornea and pupil and onto the ~~lense~~ lens of the eye.
- ② The cornea helps focus the light as it enters the eye.
- ③ The cornea and lens act together to project an inverted image on the Retina.

### ④ Transduction →

⇒ The image on the Retina is then transformed into electrical signals in a process known as transduction.

### ⑤ Neural Processing →

⇒ The electrical signals then undergo neural processing, electrical signals are propagated from the

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from the receptors cells to the brain.

⑥ Perception →

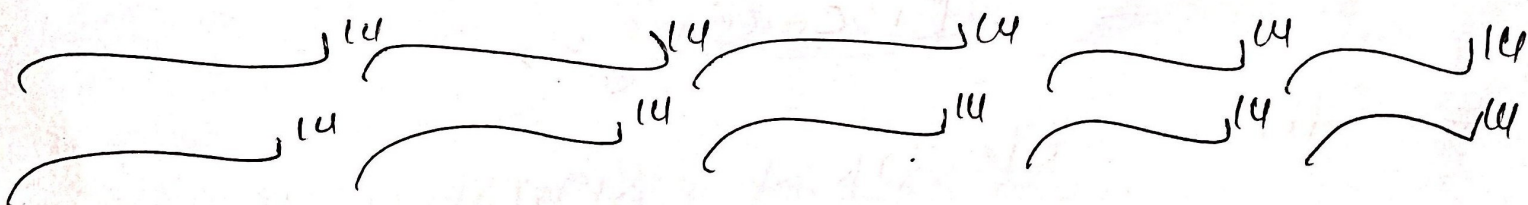
⇒ It is at this point that we become consciously aware of the stimulus.

⑦ Recognition →

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

⑧ Action →

⇒ The final step of the perceptual process involves some sort of action in response to the environmental stimulus.



(7)

Q No 8 → 03 Part (a) 8 →

a) Differentiate slip and mistakes?

Slip

- Understand system and goals.
- Correct formulation of action
- Incorrect Action

Mistakes

- May not even have right goal.
- Fixing things;
- slip: better interface design.
- Mistakes: better understanding of systems.

Q No 8 → 03 Part (b) 8 →

b) What is Fitt's Law?

Ans 8 → Fitts' law states that the amount of time required for a person to move a pointer to a target area is a function of

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(8)

of the distance to the target divided by the size of the target. Thus, the longer the distance and the smaller the target's size, the longer it takes.

In 1954, Psychologist Paul Fitts, examining the human motor system, showed that the time required to move to a target ~~divided~~ depends on the distance to it, yet relates inversely to its size. By his law, fast movements and small targets results in greater error rates, due to the speed accuracy trade-off. Although multiple variants of Fitts' law exist, all encompass this idea. Fitts' law is widely applied in user experience (UX) and user interface (UI) design.

END

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