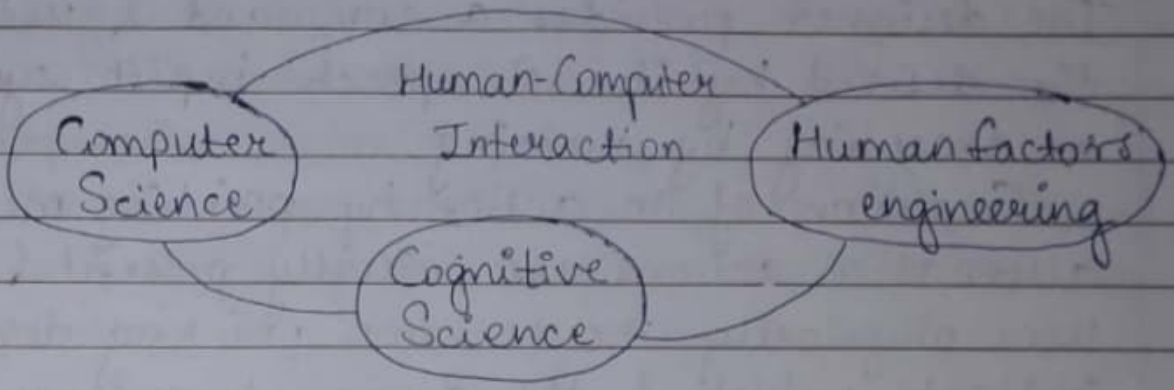
Date :

* Question and Answers -

(1) What is HCI ? What are the various phases involved in HCI ?

⇒ 1. HCI stands for Human Computer Interaction. It is a multidisciplinary field of study focusing on the design of computer technology & in particular the interaction between humans (the users) and computers. It is the study of how people interact with computers & to what extent computers are or are not developed for successful interaction with humans.



2. Stages of HCI can be thought of as convenient approximations, not as well defined, well demarcated psychological states. People are best viewed as highly parallel processing with both conscious & subconscious processing & with multiple factors continually interacting & competing to shape activity.

3. The Intention Stage :

There are two different aspects each of which can be divided into two concerns. The first aspect is to know the intentions of user, second is the support that can be offered to form sub intentio

4. The Selection Stage:

Some intentions might map directly with action others might require sequence operations In either case, the selection of sequence can require considerable knowledge There are two aspects is to figure out the method in doing task, & to select which system commands are to be invoked

5. The Execution Stage:

There are two ways to specify an action on computer: naming & pointing.

Naming is the standard situation for systems. The designer provides a command & users specify the desired by it. A speech input system would be executing by naming.

Execution of an action by pointing means that the alternative actions are visually present & that the user physically moves some pointing device to indicate which of the displayed actions are to be performed. Although the typical 'pointing' operation is to touch the desired alternative with a finger, pointing device, the definition can be generalized to include any situation where a selection is made by moving an indicator to the desired location.

6. The Evaluation Stage:

Feedback is an integral part of evaluation, whether the operation has been completed successfully or whether it has failed In cases where operation was done but the results, the user may need to 'undo'. In this case, repetition of same

action is needed.

(2) Explain comparison between Human and Computer.

⇒ 1. Human -

(i) They have common sense, brain has the ability of self power.

(ii) They can also think out of the box, sometimes they take time for recollection.

(iii) Human brain has single store where you can save unlimited information but takes time to recollect it.

(iv) Human brain receives input such as hearing, sight & also detecting abnormalities & trends in visualization. At times, they can recognize expression, voice & action.

(v) Humans are still superior to computers in many ways as they can perform decisions & solve problems based on life experiences.

2. Computers -

(i) In computers, to process anything requires electricity.

(ii) Computers requires input & process faster.

(iii) Computer supports variety of input devices such as Keyboard, mouse, joystick, microphone for voice input & recognition, biometrics & scanners, etc. All these inputs help human to communicate with computers. Until you incorporate an input command to your computer you will not receive the output.

(iv) Computer output device includes sound, display on the screen, printouts when connected to external devices.

(v) Generally computers will not sleep like humans so they can analyze, calculate & perform the task even round the clock without tiredness.

(vi) Computers are not affected or influenced by emotions feelings, wants, needs, etc.

3. Humans & computers both use electrical signals, in computer its binary system & in human its neuron to neuron.

4. Humans cannot work without physical emotions while computers act mathematically & logically. Human brain cannot be updated ! computer can be updated.

5. Humans can adapt and learn, computers cannot adapt.

(3) Write short note on :-

⇒ 1. Human -

(i) Humans have an unlimited storage in terms of memory. Though humans are capable of storing large amount of data more it is harder to recollect it.

(ii) Attention span of a human can be defined as the amount of time they are capable of dedicating to a particular task but varies from person to person.

(iii) Humans interact with the world by multiple

mediums like visual perception, touch, dialect, etc. Humans are capable of receiving light signals & passing them onto the brain for processes like cameras which were inspired.

(iv) The skin helps us to feel the environment to interact with it. Dialect or language is to convey information to each other.

(v) Psycology of a human is how your mind works, how they move or do a task. Behaviour of humans change according to scenarious & many vary from person to person.

(vi) Ergonomics are the ways of interactions among humans & other elements of the system. There are three broad domains: physical, cognitive & organizational.

(vii) Physical ergonomics are concerned with human anatomical, anthriopometric, physiological & biomechanical characteristics as they relate to physical activity. Cognitive ergonomics is concerne with mental processes like perception, memory, reasoning & motor response.

2. Computer –

(i) Computer is an electronic device that is designe to work with information. The term means a programmable machine. It cannot do anythin without a program. It represents data throug string of binary digits.

(ii) Communication takes place in digital format. Various level of translation is needed for

humans to interact with computers. An efficient computer system is capable of understanding & processing natural language.

(iii) Computer is capable of processing a large amount of data in very short span of time.

(iv) Computer accepts data from peripherals. These peripherals include Keyboard, monitor, scanner, camera, printer, etc. Computers are classified based on data processing abilities - Analog computer, personal computer; workstations, minicomputer, mainframes, supercomputer.

(4) What is meant by evaluation? Elaborate continuous evaluation process via user feedback.

⇒ 1. Evaluation is a systematic determination of a subjects merit, worth & significance using criteria governed by set standards. It can assist an organization, program, design, project or any other intervention or initiative access any aim.

2. The primary purpose of evaluation, in addition to gaining insight into prior or existing initiatives, is to enable reflection & assist in the identification of future change.

3. Feedback is a process in which the effect or output of an action is returned to modify the next action. Feedback is essential to the working & survival of all regulatory mechanism found throughout living & non living nature. Feedback is inherent to all interactions: human to human,

human to machine, machine to machine.

4. Performing evaluation based on user's feedback ensures that a quality product is delivered to the user without failing to include the users needs. It provides a new perspective to plan future goals.