National University of Computer and Emerging Sciences, Lahore Campus

	Course Name:	Human Computer Interaction	Course Code:	
	Program:	BS-CS	Semester:	Fall 2019
	Duration:	60 Minutes	Total Marks:	25
	Paper Date:	23rd September 2019	Weight:	15%
	Section:	Section C and D	Page(s):	2
	Exam Type:	Midterm-I		

Student : Name:_____ **Roll No.**_____
Section:_____

Instruction/Notes:	Attempt all questions. Your answers should be precise and to the point. Use the given space only. Extra sheets not allowed. Avoid cutting or overwriting.

Q 1. Consider any web browser that is used to navigate the World Wide Web. List down any 5 features in the browser that are designed to reduce long term memory load for the user. For example, the "autofill" feature in the address bar, enables the user to get suggestions of previously visited web pages, just when he/she starts to write a URL. This reduces the memory load of the user. List down five other features of a web browser which reduce the user's long term memory load: (5 marks)

1. ___predictive text _____
2. ___Bookmarks_____
3. ___Maintain history _____
4. ___Save offline searches_____
5. ___Option of restoring all tabs if explorer crashes_____

Q 2. Alexa, Siri and Google Assistant are examples of speech recognition systems. Identify five challenges from HCI perspective, in building speech recognition systems. (5 marks)

1. _Contextual Ambiguity_____
2. _Different accents _____
3. _Different languages_____
4. _More than one meaning of words_____
5. _Different pronunciations of the same words_____

Q 3. A library kiosk is being developed to facilitate the students coming to the library. It will also reduce the requirement of having library staff. The kiosk will enable the students to issue books, return books, search for books and reserve books. Identify what kind of interface will the library kiosk have. Point out explicitly the hardware requirements for input and output. (5 marks)

Please see this video to have an idea of the kind of library kiosk I want students to visualize: https://youtu.be/do418ylDQ_M _____
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Q 4. Identify the type of reasoning being used in the given scenarios.   (5 marks)

Given scenario	Type of reasoning
When I long press any button on a smartphone, a menu pops up. So I'll long press "delete" button, to see a menu related to delete functionality.	Deductive
All ATMs I have ever visited till now have touch screens, so the ATM of the bank near my university will also have a touch screen interface.	Inductive
Whenever a user buys a security patch for his system from Microsoft's website, the color scheme of his OS changes. One day the user turned on his computer and the color scheme had changed. He got worried that an unauthorized purchase has been made.	Abductive
The Word files in my laptop are not opening. I think there is a virus in my computer.	Abductive
I have been driving since 10 years. Whenever I turn the key anti clockwise fully, my car keys come out. In this new (automatic) car, when I'm turning my car keys anticlockwise the key is not being released, while I think it should come out.	Inductive

Q 5. a) Write down three examples of hardware which can be used to enter English text in a computer/device.   (3 marks)

1. _____Qwerty Keyboard_____
2. _____Chord Keyboard_____
3. _____Mic (Speech recognition system)_____

b) Write down 4 features of a virtual keyboard in a smartphone, which enhance the user experience: (2 marks)

1. ____Swipe screen_____
2. ____Emojis_____
3. ____Speech_____
4. ____Predictive text_____