Course Code: CS 422	Course Name: Human Computer Interaction
Instructor Name : Mr. Behraj Khan	
Student Roll No:	Section No:

Time: 3 Hrs   Total points 80

1.
   a. As a computer scientist you are asked by your instructor to develop an application that can help deaf people in learning? For this application, how will you implement multimodality? Explain how you will use cultural probe method for requirement gathering? Will echoic channel be helpful? Justify (5 points)
   b. Which contrast will be helpful for the above scenario in case if user is reading? Justify, as your app will help user in reading so how the saccades and regression will be differentiated? (5 points)

2.

   Your software house which sells spreadsheets and word processors, has received some complaint from users, which is about when user copy from spreadsheet and paste that data into word processor. The default behavior of word processor is "paste" command which simply insert the numeric value, whereas a special option is "paste special" insert the recalculating formula as well. This help user and they requested for adding some extra item on the pop-up (right click) menu. How would you estimate the increase in operation speed that might result from this change? How would you confirm the actual speed increase after constructing a prototype? (10 points)

3. As the announcement were made for attending the session arranged from Careem on Friday. So the following questions are from that session.
   a. Explain the concept of crazy 8 as discussed during the session. (5 points)
   b. What was the example of managing value given during the session? Hint: It was related to shipping time of new features. (5 points)
   c. What was the example of setting the most used choice as the default option to reduce the number of steps during booking? (5 points)

4.
   a. Differentiate between proactive and retroactive interference with the help of one example each. (5 points)
   b. What is scripts memory model? Why is it used? (5 points)

5. Formulate the learning activity discussed in Q1 into Norman Model. (5 points)
6.
   a. Describe the levels of interaction for the scenario given in Q1. (5 points)

     b. How localization and internationalization will be applied for the above scenario given in Q1. (5 points)

7. Karachi is an international city; many foreign visitors visit every year. The government hire you to design a user friendly subway automatic ticket selling machine. Design a screen (not login page or page) for this problem and explain that how will you implement the following Norman's principles. (rationalize your answer, simple definition will be graded as zero) (5 points)
   a. Making things visible
   b. Get the mapping right
   c. Exploit the power of constraints

8. How will you implement stability and task adequacy for the scenario given in Q1. How will you differentiate between task adequacy and immediate honesty? (5 points)

9. As discussed in class that human information processing includes sensory store, perception, working memory, long-term memory, attention, response execution, output and feedback loop. (5 points)
   a. give a short description (with drawing) about how different aspects (listed above) are related to each other.
   b. how will you differentiate the working memory and long term memory? how they relate with each other?
   c. why is attention important in human information processing?

10. What do we mean by ergonomics in HCI? What role it plays in HCI? Is it play a vital role at time of implementation? (5 points)