



CRAWFORD UNIVERSITY FAITH CITY IGBESA
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER AND MATHEMATICAL SCIENCES
COURSE CODE: CSC/ICT 306 COURSE TITLE: HUMAN COMPUTER INTERACTION
SESSION: 2020/2021 TIME: 2½ HOURS

Instruction: Answer Question One and any other Three

Question One

Crawford University guest house has installed a sandwich making robot to supply room service sandwiches at any hour of the day. The guest house also has an automated delivery system that will take the completed sandwich to a specified room. You have been asked to program a software agent interface that guests can phone to order sandwiches.

- a. Write a short scenario describing how a guest would order a sandwich using your interface 5marks
- b. Provide a hierarchical task description of the sandwich ordering process. Note particularly where there might be choice points or alternative methods. Also explain your criteria for the level of decomposition used. 10marks
- c. Would you use a voice recognition system or ask the user to push phone buttons to enter responses? Explain the relative advantages and disadvantages of each for this particular situation. 6marks

Question Two

- a. When simple things need pictures, labels, or instructions, the design has failed. What makes up a good design? Support your answer with a valid scenario 7marks
- b. Differentiate between real and perceived affordances with an example each 3marks
- c. What are constraints? Mention the types of constraints that can aid good design 3marks

Question Three

- a. Name two differences between long and short term memory. 2marks
- b. Explain the Usability Engineering Life Cycle 7marks
- c. Compare and contrast between the structure of a human and computer memory 4marks

Question Four

- a. With the aid of a diagram, show the model of factors that contribute to usability 5marks
- b. In usability engineering life cycle, prototyping is one of the stages involved in the cycle. Differentiate between the types of prototypes. 4marks
- c. State the HCI implementation support tools with an example each 4marks

Question Five

- a. Differentiate between interaction and interface design 2marks
- b. Name two differences between formative and summative evaluation. 4marks
- c. The methods of usability evaluation can be classified according to who performs them. Mention the two methods applicable and elaborate on one of these methods. 7marks

Question Six

HCI explores several areas in order to provide user centered designs with maximum user satisfaction. Highlight the contribution, methods, applications and merits of these areas:

- a. Virtual and Augmented Reality 4marks
- b. Groupware/Collaborative work 4marks
- c. Cognitive Models 5marks