(Knowledge for Development)

KIBABII UNIVERSITY
(KIBU)

UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATIONS
FIRST YEAR SECOND SEMESTER

FOR THE DEGREE IN
(INFORMATION TECHNOLOGY)

COURSE CODE: BIT 324/BIT 414

COURSE TITLE: HUMAN COMPUTER INTERACTION

DATE: 16/02/2021   **TIME:** 2.00 P.M – 4.00 P.M.

INSTRUCTIONS

ANSWER QUESTIONS **ONE** AND **ANY OTHERTWO**.

QUESTION ONE (COMPULSORY) [30 MARKS]

a. What is the difference between utility and effectiveness as used in Human computer Interaction goals? [2 marks]

b. Discuss at least four Human Computer Interaction Benefits. [8 marks]

c. Graphical user interface (GUI) provides a set of components to interact with software or hardware. Every graphical component provides a way to work with the system. State and explain at least **FOUR** GUI elements. [8 marks]

d. Explain the 8 Golden Rules defined by **Shneiderman** for a good interface design. [8 marks]

e. Define Affordance and Mapping as explained by **Don Norman**. [4 marks]

QUESTION TWO (20 MARKS)

a. Robustness concerns itself with supporting the user in successfully accomplishing an action with the system and assessment of the action. There are various principles to be applied to support a system robustness explain these factors. [8 marks]

b. What is Task analysis [2 marks]

c. **Discuss** Anthropomorphic Approach and Cognitive Approach as used in Human Computer Interaction design approaches. [4 marks]

d. A dialog is the construction of interaction between two or more beings or system, explain the three levels studied In Human Computer Interaction. [6 marks]

QUESTION THREE (20 MARKS)

a. Explain Five Forces responsible for shaping the nature of future computing. [5 marks]

b. Discuss Empirical Approach and Predictive Modeling Approach as used in Human Computer Interaction design approaches. [4 marks]

c. Discuss the Seven Principles of Universal Design. [7 marks]

d. What is the difference between Process-oriented and a structure-oriented design rationale technique? [4 marks]

QUESTION FOUR (20 MARKS)

a. The ISO standard describes **Six** key principles that will ensure a design is user centered explain these 6 key principles [6 marks]

b. Define Engineering task model. [2 marks]

c. To represent dialogs, we need formal techniques that serves two purposes, Name these techniques. [2 marks]

d. What is the difference between Process-oriented and a structure-oriented design rationale technique? [4 marks]

e. Explain what is meant by The Gulf of Execution and The Gulf of Evaluation. [4 marks]

f. What is Participatory Design? [2 marks]

QUESTION FIVE (20 MARKS)

a. User support comes in a number of styles explain these styles [6 marks]

b. What are the four basic activities of interaction design? [4 marks]

c. Name the two Notations used for dialog description. [2 marks]

d. With the aid of a well labeled diagram explain the four distinct phases involved in User centered design. [8 marks]