



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
YEAR THREE SEMESTER TWO EXAMINATIONS**

**FOR THE DEGREE OF
BACHELORS OF SCIENCE
(INFORMATION TECHNOLOGY)**

COURSE CODE : BIT 324

COURSE TITLE : HUMAN COMPUTER INTERACTION INFORMATION

DATE: 19/01/2021

TIME: 8.00 A.M. – 10.00 A.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO

QUESTION ONE (COMPULSORY) [30 MARKS]

- a. Define Human Computer Interaction [2 Marks]
- b. Discuss four facts about Human Computer interaction [4 Marks]
- c. A computer system comprises various elements, each of which affects the user of the system, briefly explain these elements as used in Human Computer interaction [4 Marks]
- d. The communication between the user and the system, their interaction framework has four parts , explain these four parts. [4 Marks]
- e. In the study of Human computer Interaction a computer system comprises various elements, each of which affects the user of the system, briefly explain these elements [4 Marks]
- f. Human Computer Interaction Information is received and responses given via a number of input and output channels explain the following Channels. [6 Marks]
- i) Visual channel
 - ii) Auditory channel
 - iii) Haptic channel.
- g. Discuss what we are likely to see in future Human- Computer interfaces [6 Marks]

QUESTION TWO [20 MARKS]

- a. Flexibility refers to the diversity of ways in which the user and the system exchange information. This can be achieved through categorized ways, Explain at least four categorized ways of flexibility [8 Marks]
- b. Explain the Forces shaping the nature of future computing as used in Human Computer interaction [8 Marks]
- c. Task Analysis plays an important part in User Requirements Analysis, with the aid of a well labeled diagram explain task analysis [4 Marks]

QUESTION THREE [20 MARKS]

- a. Learnability revolves around the features of an interactive system that allow novice users to understand how to use it at first and then how to attain a maximal level of performance. Learnability makes use of various factors to familiarize a user to a new system explain at least four factors of learnability. [8 Marks]

- b. Give the distinction between a process-oriented and a structure-oriented design rationale technique **[8 Marks]**
- c. Explain the Three principles for user-centered approach **[3 Marks]**
- d. What is Participatory Design? **[1 Marks]**

QUESTION FOUR [20 MARKS]

- a. Ben Shneiderman proposed a collection of principles that are derived heuristically from experience and applicable in most interactive systems after being properly refined, extended and interpreted Explain Shneiderman's "eight golden rules of interface design" **[8 Marks]**
- b. Robustness concerns itself with supporting the user in successfully accomplishing an action with the system and assessment of the action. Explain the four various principles to be applied to support a system robustness **[8 Marks]**
- c. Discuss the four basic activities of interaction design **[4 Marks]**

QUESTION FIVE [20 MARKS]

- a. Explain the six interface design “design of everyday things” by Don Norman **[6 Marks]**
- b. Discuss the Seven Principles of Universal Design **[7 Marks]**
- c. With the Aid of a well labeled diagram explain the four distinct phases involved in User centered design. **[7 Marks]**