



*(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.**

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**INSTRUCTIONS**

**ANSWER QUESTIONS ONE AND ANY OTHER TWO.**

### 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]