



MAASAI MARA UNIVERSITY

UNIVERSITY EXAMINATIONS 2021/2022 (REGULAR)

**SCHOOL OF PURE, APPLIED AND HEALTH SCIENCES
DEGREE OF BACHELOR OF SCIENCE (COMPUTER SCIENCE)**

FOURTH YEAR FIRST SEMESTER EXAMINATION

COURSE CODE: COM 4103

COURSE TITLE: HUMAN COMPUTER INTERACTION

DATE: 4TH APRIL 2022

TIME: 8:30am-10:30am

INSTRUCTIONS TO CANDIDATES

- **Question ONE in Section "A " is Compulsory**
- **Answer any Two (2) Questions from Section "B"**
- **Illustrate your answers where necessary**

QUESTION ONE (COMPULSORY)

- (a) There are a variety of expert review methods. Discuss five methods that can be used by HCI specialists. **(5 marks)**
- (b) Explain the advantages of using sound in user interface design. **(5 marks)**
- (c) Discuss the current trends in the development of interacting devices. **(5 marks)**
- (d) Explain how a human being's short-term memory affects the design of user interfaces. **(5 marks)**
- (e) With reference to the MPESA application system discuss how the interface has been engineered for errors. **(10 marks)**

QUESTION TWO

- (a) You have been asked to review the school's ERP and advice on how the user interface can be redesigned to support users with physical and cognitive impairments and learning difficulties.
 - i. Outline problems that people with physical and cognitive challenges face while using applications. **(5 marks)**
 - ii. Advice on the interface design concepts to be considered to include this group of people. **(5 marks)**
- (b) Discuss the importance of progress indicators and show how lack of these indicators can affect a user's experience. **(10 marks)**

QUESTION THREE

- (a) There are occasions where color can help the user interface designer. Discuss five ways in which color is used in user interface design. **(5 marks)**
- (b) Discuss five different interaction styles used to accommodate the dialog between the user and the computer. **(5 marks)**
- (c) It is a good practice for HCI specialists to make use of standards and principles. Discuss the guidelines in Shneiderman's principles of user interface design. **(10 marks)**

QUESTION FOUR

- (a) Differentiate between a persona and scenario techniques used in user interface design. **(4 marks)**
- (b) Discuss how response time in user interface design is an important determinant of user productivity. **(6 marks)**
- (c) Discuss the importance of using prototyping method in user intercede design. **(4 marks)**
- (d) Discuss the following popular statement as used in HCI profession and show how designers can address this issue while designing user interfaces.
"Recognition rather than recall." **(6 marks)**