



THE CO-OPERATIVE UNIVERSITY OF KENYA

END OF SEMESTER EXAMINATION DECEMBER -2022

**EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION
TECHNOLOGY, INFORMATION TECHNOLOGY
(YR III SEM I/II)**

UNIT CODE: BCIT 3126/BCSC 3219

UNIT TITLE: HUMAN COMPUTER INTERACTION

DATE: THURSDAY, 15TH DECEMBER, 2022

TIME: 2:00 PM – 4:00 PM

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INSTRUCTIONS:

- **Answer question ONE (compulsory) and any other TWO questions**

QUESTION ONE

(a) Differentiate between the following pairs of terms

- (i) User design and User Centered design
- (ii) Ethnography and Participatory design

[8 Marks]

(b) Describe the following design principles derived from the Gestalt theory.

- (i) Proximity
- (ii) Similarity
- (iii) Continuity
- (iv) Closure
- (v) Connectedness

[10 Marks]

(c) Define the term usability in the context of HCI.

[4 Marks]

(d) Although WIMP interfaces, which are a combination of Menus, dialog boxes, and 'point and click,' currently dominates interface designs there are other forms of interfaces. Describe eight other forms of interfaces.

[8 Marks]

QUESTION TWO

(a) Prototypes can be categorized as *low fidelity prototypes* (e.g. paper prototypes) and *high fidelity prototypes*. Discuss the advantages and disadvantages of each.

[15 Marks]

(b) Describe the concept of multi-modality design.

[5 Marks]

QUESTION THREE

(a) Describe three elements of the Gulf of Execution.

[6 Marks]

(b) Proximity in design implies related items should be close to each other, and unrelated items should be distant. Consider the list of potential links in a web page below:

- checkout
- close out on pink socks
- Email us
- July specials
- Kid's clothes
- Men's clothes
- Open an account
- Sale on rainwear
- Special sizes
- Store locations
- your account status
- Women's clothes

The list is alphabetical and all items are grouped together. This is poor visual organization. Using the proximity principle, outline a better design for the web page.

[14 Marks]

QUESTION FOUR

(a) Citing relevant examples, discuss the Nielsen's 10 usability Heuristics.

[10 Marks]

(b) Explain ten (10) principles of User Centered Design (UCD).

[10 Marks]

QUESTION FIVE

(a) Discuss the benefits of universal design to the individual user, society and business.

[15 Marks]

(b) Explain how the Norman's model above can be used to demonstrate why some interfaces cause problems to their users.

[5 Marks]