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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR
FOURTH YEAR, FIRST SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(COMPUTER SCIENCE)

Date: 14th April, 2022
Time: 11.30am –1.30pm

KCS 402 - HUMAN COMPUTER INTERACTION

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Describe the concept of human computer interaction. (3 marks)
- b) State four benefits of studying HCI as a computer expert. (4 marks)
- c) Define the term Heuristics evaluation. (2 marks)
- d) Highlight the Nielsen's ten Usability principles applied in the design of computerized systems. (10 marks)
- e) HCI design guidelines are important and must be observed keenly when designing a system. They guide on information display and data entry. Explain any SIX general design guidelines that are followed. (12 marks)

QUESTION TWO (20 MARKS)

- a) Define the term usability. (1 marks)
- b) State five goals of Usability Engineering. (5 marks)
- c) Describe the three main components of usability. (6 marks)
- d) Describe the term software tool as used in HCI. (2 marks)
- e) Discuss any three tools used in HCI. (6 marks)

QUESTION THREE (20 MARKS)

HCI design guidelines are important and must be observed keenly when designing a system. They guide on information display and data entry.

- a) Explain any five design guidelines that are followed when designing an information display. (10 marks)
- b) Explain any five design guidelines that are followed when designing a data entry system. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the interactive design system as used in HCI design and Engineering. (10 marks)
- b) Define the term metaphor as used in HCI. (2 marks)
- c) Describe any four types of metaphors used in HCI. (8 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss any five types interactive devices used in HCI. (10 marks)
- b) Explain the following terms in relation to dialog design;
 - i) Visual Thinking (5 marks)
 - ii) Direct Manipulation Programming (5 marks)