



OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, STUDENT AFFAIRS AND RESEARCH

UNIVERSITY EXAMINATIONS

2022 /2023 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE

MAIN EXAMINATION

COURSE CODE: COM415

COURSE TITLE: HUMAN FACTORS IN COMPUTING AND
INFORMATION SYSTEMS

DATE: 21ST DECEMBER 2022

TIME: 9-12PM

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF PRINTED PAGES

PLEASE TURN OVER

MAIN EXAMINATION

COM415: HUMAN FACTORS IN COMPUTING AND INFORMATION SYSTEMS

STREAM: BSc (Computer Science)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer ALL questions from section A and any THREE from section B.
- ii. Maps and diagrams should be used whenever they serve to illustrate the answer.
- iii. Do not write on the question paper.

SECTION A (24 MARKS) COMPULSORY

QUESTION ONE (12 MARKS)

- a) Differentiate between usability and Human Computer Interaction (HCI) (4 Marks)
- b) List any four types user interfaces (4 Marks)
- c) Discuss the psychological aspects of interaction between humans and computers (4 Marks)

QUESTION TWO (12 MARKS)

- a) Explain how a software developer should consider cultural diversity in user interface design. (4 marks)
- b) There is a definite difference in the approach to software between inexperienced and experienced users. Software designers need to take account of these differences in shaping their designs. Discuss the ways in which HCI designers can cater for the two types of users in designing software systems. (8 marks)

SECTION A (36 MARKS)

QUESTION THREE (12 MARKS)

- a) Discuss human factors central to interface evaluation [12 Marks]

QUESTION FOUR (12 MARKS)

- a) Discuss the user interface design principles as advocated by Shneiderman (8 Marks)
- b) Explain the disadvantages of using a touch screen as an interacting device. (4 Marks)

QUESTION FIVE (12 MARKS)

- a) Interaction modes are the facilities for accessing the database system. A wide range of available modes are designed to accommodate the variety of users who may require database interaction. Discuss these modes (12 Marks)

QUESTION SIX (12 MARKS)

- a) Explain why Cognitive psychology is more intimately related to the design of computers than to that of traditional machines such as automobiles and home appliances. (6 Marks)
- b) There are many different ways of characterizing the activities involved in the design process of interactive system. One of it is design which further categorized under conceptual and physical design. Differentiate the two terms. (6 Marks)

QUESTION SEVEN (12 MARKS)

- a) Discuss how a software developer should design the interface to take into consideration the following: (12 marks)
- i. Feedback
 - ii. Familiarity
 - iii. Standardization
 - iv. Short term memory
 - v. Recoverability