



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
(BSITSEPT2014) & BACHELOR OF BUSINESS INFORMATION
TECHNOLOGY (BBITSEPT2015)

BIT 2305; EIT 4307: HUMAN COMPUTER INTERFACE/INTERACTION
SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2HOURS

DATE: Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- a) Outline any five data gathering guidelines (5 marks)
- b) Provide suitable answers to the questions: why, what, where and when to evaluate during interaction design (4 marks)
- c) Explain three types of evaluation methods (3 marks)
- d) What are the possible first steps an interaction designer would consider in formulating a conceptual model (4 marks)
- e) When designing software interfaces it is important to understand the users, why is this necessary? (3 marks)
- f) During interaction design prototyping is a major process, outline five reasons why it is important. (5 marks)

- g) Users could be frustrated by a system interface, outline FIVE possible causes of this frustrating to system users (5 marks)
- h) Explain the following terms as used in data gathering (4 marks)
- Scenarios
 - Use cases

What is a prototype in interaction design? Give any four examples (4 marks)

Question TWO

a) Describe the following components of a conceptual model found on most online shopping websites (10 marks)

- Shopping cart
- Proceeding to check-out
- 1-click
- Gift wrapping
- Cash till

b) Outline three advantages and three problems of online questionnaires (6 marks)

c) Differentiate between Quantitative and Qualitative Analysis. (4 marks)

Question THREE

Discuss each of the following cognitive processes, and discuss their implications in the design process.

- Attention
- Perception
- Memory
- Learning
- Reading, speaking and listening

(20 marks)

Question FOUR

The following interface types are commonly used in the design of systems discuss their unique features and the research design issues for each of them:

- i. Command based interface (10 marks)
- ii. WIMP and GUI (10 marks)

Question FIVE

a) Clearly explain with the help of a life cycle diagram the basic activities of interaction design. (8 marks)

b) Discuss clearly the importance of the following terms used in user involvement during interaction design

- Expectation management (3 marks)
- Ownership (3 marks)

c) Explain the term user-centered approach in terms of what is it based on (6 marks)