



TECHNICAL UNIVERISTRY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATIONS FOR DEGREE IN:
BACHELOR OF TECHNOLOGY IN INFORMATION COMMUNICAITON
TECHNOLOGY (BTIT 12S)

EIT 4307: HUMAN COMPUTER INTERACTION

END OF SEMESTER EXAMINATION

SERIES: APRIL 2015

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions.

Attempt question **ONE (Compulsory)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

- a) Define the term Human Computer Interaction **(3 marks)**
- b) What is computer according to David Moore **(1 mark)**
- c) Differentiate between notion of humans and notion of computers in HCL **(3 marks)**
- d) Describe FOUR factors that led to the rapid growth of HCL since 1985 **(8 marks)**
- e) List FIVE classic interaction systoles for user centered design **(5 marks)**

- f) Identify EIGHT golden rules for interface design, suggest FOUR objectives of these rules (10 marks)

Question Two

- a) Define the term Direct Manipulation in the context of interface design (2 marks)
- b) Describe FOUR merits of direct manipulation interaction style (8 marks)
- c) Suggest FOUR demerits of direct manipulation interaction style (8 marks)
- d) Identify TWO typical errors encountered with direct manipulation (2 marks)

Question Three

- a) Define the term cognition in context of HCL (2 marks)
- b) Explain THREE main activities of long term memory (3 marks)
- c) Describe how information is stored into human memory (4 marks)
- d) Identify FIVE construct that explain Gestalt laws of perceptions (5 marks)
- e) Describe GOMS model of user interaction (6 marks)

Question Four

- a) Describe how Normans Gulf of execution and evaluation can be applied to software design (5 marks)
- b) Suggest how the use of Normans Gulfs of execution and Evaluation would improve the design process. (4 marks)
- c) Identify FOUR process of human information processing (5 marks)
- d) Describe FOUR factors that determine the meaningful icons (6 marks)

Question Five

- a) List FIVE objectives of evaluating a user interface design (5 marks)
- b) Describe the human interface evaluation life cycle (5 marks)
- c) Outline Nielsen's 10 usability heuristics for user interface evaluation (10 marks)