



TECHNICAL UNIVERISTRY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR DEGREE IN:
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
(BTIT 13M/13S –Y3 S2)

EIT 4307: HUMAN COMPUTER INTERACTION

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2014
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 attention in context of HCI (2 marks)
- b) Differentiate between formative and summative evaluation. (2 marks)
- c) Identify FOUR types of attention in HCI (4 marks)
- d) Outline FOUR techniques of attracting attention (4 marks)
- e) Describe the THREE aspects of Human Information Processing (9 marks)
- f) Briefly explain how the following human factors help improve the design of systems. (9 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 the context of HCI **(2 marks)**
- b) Explain THREE main activities of the long-term memory **(3 marks)**
- c) Explain how information is stored in memory **(4 marks)**
- d) Identify FIVE constructs that explain Gestalt Law of Perception **(5 marks)**
- e) Describe the GOMs model of user interaction **(6 marks)**

Question Four

- a) Describe how Normans Gulf of execution and evaluation can be applied in software design. **(5 marks)**
- b) Suggest how the use of Normans Gulf of execution and evaluation would improve the design process **(4 marks)**
- c) Identify the FOUR stages of human information processing **(5 marks)**
- d) Describe FOUR factors that determine the meaningfulness of locus **(6 marks)**

Question Five

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