



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE**

SCS 415: HUMAN COMPUTER INTERACTION

DATE: TUESDAY 23RD NOVEMBER 2010

TIME: 2.00 P.M – 4.00 P.M

INSTRUCTIONS: Answer Question 1 and any other Two Questions

QUESTION ONE

- (a) (i) Define the term HCL
- (ii) Why do need to design good user interfaces? Outline. (7 Marks)
- (b) Outline the **six** common interface styles. (6 Marks)
- (c) Distinguish between the two terms gulf of execution and gulf of evaluation. (4 Marks)
- (d) Describe the method of rapid (throw-away) prototyping in developing a user interface outlining its strengths. (7 Marks)
- (e) Discuss the **three** possible options available for the organization of arrangement of controls and displays in interactive systems. (6 Marks)

QUESTION TWO

- (a) An e-commerce website entry screen is being designed. The application will use a graphical user interface consisting of a large number of text boxes, menus icons and windows. The information to be entered will be in several categories, including personal

details, account details and transaction information. Discuss using examples the key types of human senses that will be involved in your interaction with the system.(8 Marks)

- (b) Physically the three types of memory are not divided, but differ from one another based on their functionality and properties. Outline these functions and properties. (12 Marks)

QUESTION THREE

- (a) Define each of the following terms as used in interaction:
- (i) Domain
 - (ii) Task
 - (iii) Goal
 - (iv) Intention
- (b) Outline the main stages in the Norman's model of interaction. (7 Marks)
- (c) Using a suitable diagram, briefly describes the **four** steps of an interactive cycle in the interaction framework model. (9 Marks)

QUESTION FOUR

- (a) Explain, using a number of examples, the principles of
- (i) Visibility
 - (ii) Affordance (6 Marks)
- (b) Describe, with the aid of a diagram, the Extended Human Information Processing model. (9 Marks)
- (c) Explain what you understand by the term command line interface outlining why you think they are useful. (5 Marks)

QUESTION FIVE

Most modern Graphical User Interfaces (GUIs) are based on the desktop metaphors seen with operating systems such as windows and Mac OS.

- (a) What is meant by desktop metaphor in the context of user interface? (5 Marks)
- (b) Describe the generally accepted rationale for the widespread use and success of the desktop metaphors in GUI operating systems. (10 Marks)
- (c) Describe **two** limitations of the desktop metaphors for users of today's interactive systems. (5 Marks)