



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

Select department

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY:

BTIT SEP 2013 Y3S2

EIT 4307: HUMAN COMPUTER INTERACTION

END OF SEMESTER EXAMINATION

SERIES:APRIL2016

TIME:2HOURS

DATE:Pick DateMay2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. AttemptChoose instruction.

Do not write on the question paper.

Question ONE

CASE STUDY: HEURISTICT EVALUATION OF GOOGLE MAPS IN GOGGLE EARTH

Google Maps is a well-known free service provided by Google worldwide. It's not just a bunch of maps, it includes multiple layers: roads, terrain, satellite, street view, traffic etc. It also integrates user ratings and pictures with locations and businesses in the area. Assuming that all of us have used Google maps at some point in life. Describe how you would use Nielsen's Ten Heuristics to evaluate Google Maps application.

[20 marks]

a. Describe four stages of an interactive system design.

[4 marks]

- b. Gestalt laws of aesthetics can be used to govern a website’s visual quality by employing the following techniques
- i. Ordered Grid
 - ii. Visual Balance
 - iii. Low visual noise
 - iv. Color & Graphics

Explain what you understand by each term [6 marks]

Question TWO

a) Explain what you understand by aesthetics and minimalistic design [5 marks]

b) Define the term “model based design”. List two categories of models used in HCI [4 marks]

b) List two merits and two demerits of model based design [4 marks]

d) Explain the actions of the Keystroke Level Model (KLM) [7 marks]

Question THREE

a) Explain what you understand by GOMS model of interaction design [2 marks]

b) A designer requires a window interface that can be closed in either of the two methods: by selecting the ‘close’ option from the file menu or by selecting the Ctrl key and the F4 key together. Describe how to model the task of “closing the window” for this system using GOMS model. [6 marks]

Goal: Close window

- [Select Goal: Use menu method

Operator: Move mouse to file menu

Operator: Pull down file menu

Operator: Click over close option

Goal: Use Ctrl+F4 method

Operator: Press Ctrl and F4 keys together]

c) List two limitations of the GOMS model [2 marks]

d) Describe five factors that determine the meaningfulness of icons [10 marks]

Question FOUR

- a) Identify four classic interaction styles for user centered design [4 marks]
- b) Describe four merits of direct manipulation interaction style [6 marks]
- c) Describe five golden rules for GUI design [10 marks]

Question FIVE

- a) Explain what you understand by “cognitive walkthrough” outlining an actual walkthrough process [5 marks]
- b) Identify the components of Norman’s seven stage model [5 marks]
- c) Outline Norman’s levels of abstraction of knowledge of the user [5 marks]
- d) List five qualities of a good interface design for GUIs [5 marks]