



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATION AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS
ADMINISTRATION
4TH YEAR 2ND SEMESTER 2013/2014 ACADEMIC YEAR
CENTRE: MAIN

COURSE CODE: SCS 416

COURSE TITLE: HUMAN COMPUTER INTERACTIONS

EXAM VENUE: LAB 8

STREAM: (BBA)

DATE: 17/04/14

EXAM SESSION: 11.30 – 1.30 AM

TIME: 2.00 HOURS

Instructions:

- 1. Answer question 1 (Compulsory) and ANY other 2 questions**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE: {30MAKS}

- a) What is Human computer Interaction and how is it beneficial to the user's of the systems, the developers and the vendors of the software's and hardware devices. {8marks}
- b) A variety of interaction styles (e.g. direct manipulation) can be used to support a conceptual model of Human computer interaction. Describe three such interaction styles. {6marks}
- c) Your company has been asked to develop an online car hire system. The system should, at the very minimum, allow the customer to select dates of travel, pick up and drop off locations, manual or automatic, category of car (e.g. small, medium, large), and type/model of car (within the chosen category).
- (i) Choose a suitable interaction style or styles and draw a screen mock-up of the interface. Include a paragraph describing how the user will interact with the system. {4marks}
- (ii) Justify your choice of interaction style(s) and other usability aspects. {4marks}
- d) Discuss the following in HCI
- i. What is a windowing system {2 marks}
 - ii. Explain three benefits of using windows {3marks}
 - iii. Explain three ways of managing multiple windows {3 marks}

QUESTION TWO 20MARKS

- a) Explain Norman's Principles of Usability in Human Computer Interface {8marks}
- b) Describe the term evaluation in Human Computer Interface {2 marks}
- c) Highlight the importance of evaluation in computer interaction {4 marks}
- d) Define the following terms as used in HCI
- i. Visual affordance {2marks}
 - ii. Combo box {2marks}
 - iii. Dialogue box {2marks}
- e)

QUESTION THREE 20MARKS

- a) Identify three different ways in which 'functional ageing' can affect interface development
. {2marks}
- b) As screens grow larger, some designers are tempted to increase the number of menu items displayed at once. For example, with 100 departments in Organisation, give three strategies for organizing the layout and justify them briefly based on user tasks and knowledge {3 marks}
- c) Briefly explain what is meant by the terms perception, physiology and cognition
. {3 marks}
- d) Describe the term evaluation as used in HCI {2 marks}
- e) Give four reasons for evaluation of a prototype model in HCI design {4 marks}
- f) An important part of the interface designer's job is to assist the user in forming a suitable mental model of the system. Outline two mental models used in HCI and give the difficulties encountered when dealing with the mental {6 marks}

QUESTION FOUR 20MARKS

- a) Explain the process of designing user interface for designing an interactive interface
. {6 marks}
- b) As screens grow larger, some designers are tempted to increase the number of menu items displayed at once. For example, with 100 departments in organization, give three strategies for organizing the layout and justify them briefly based on user tasks and knowledge {6marks}
- c) The following disciplines have impacted on the development of HCI, Discuss
. {8marks}
 - i. Computer Science
 - ii. Linguistics
 - iii. Psychology
 - iv. Ergonomics

QUESTION FIVE 20MARKS

- a) Explain any four Evaluating Designs techniques in Human Computer interaction. {8 marks}
- b) A company that sells both spreadsheets and word processors has received complaints from users in the banking industry. The users often copy data from spreadsheets into letters offering special finance terms to individual customers. The default behaviour of the word processor \paste" command is simply to insert the numeric value, whereas a special option (in the \paste special:" dialog) inserts a recalculating formula. The special option is used so regularly that users have requested an extra item on the pop-up (right click) menu.
 - (i) How would you estimate the increase in operation speed that might result from this change? {4 marks}
 - (ii) How would you confirm the actual speed increase after constructing a prototype {4 marks}
- c) Explain Computer supported collaborative work as used in HCI {4marks}