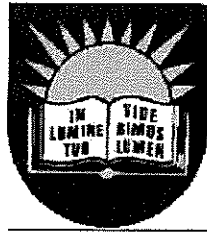


UNIVERSITY OF FORT HARE



HONOURS EXAMINATION: NOV 2017

CSC 522: HUMAN COMPUTER INTERACTION

Time: 3 Hours

Marks: 100

**Internal Examiner
Prof K. Sibanda**

**External Examiner
Dr N Mabanza**

INSTRUCTIONS!!!

1. This paper consists of 3 pages (including cover page).
2. There are **FIVE** questions in this paper, answer them all.
3. Please number your answers correctly.
4. The total numbers of points that can be earned on this exam is 100.

QUESTION ONE: Specific HC I Guidelines [20 points]

- 1.1 Distinguish between principles and guidelines, using examples of each to illustrate. [6]
- 1.2 Why is context important in selecting and applying guidelines and principles for interface design? (*Help: Context refers to the physical and social situation in which computational devices are embedded*). [6]
- 1.3 Imagine that you have been asked to design a website for primary school children. Write down 4 guidelines that you may use and explain each guideline. [8]

QUESTION TWO: Human Factors as HCI Theories [20 points]

- 2.1 What are *mental models*, and why are they important in interface design? [3]
- 2.2 "A little psychology is worse than none at all". Do you agree with this statement? Justify your stand in the context of designing usable interactive systems. [3]
- 2.3 Describe what impact does cognition have on human-computer interaction? [4]
- 2.4 Briefly discuss how knowledge on cognitive and physical human capabilities can be used to build usable and useful systems. [10]

QUESTION THREE HCI Design [20 points]

- 3.1 Compare scenario modelling and task modelling. [5]
- 3.2 Describe wire-framing in HCI design. Use an example to illustrate your answer. [5]
- 3.3 Write short notes on the following:
i. Requirements analysis. [5]
ii. User analysis. [5]

QUESTION FOUR: (User Interface Evaluation) [20 points]

Choose any two user interface evaluation methods from the given list below and describe them in detail. [20]

- 4.1 Expert-based evaluation methods
- 4.2 Subjective evaluation methods
- 4.3 Objective evaluation methods
- 4.4 Experimental evaluation methods

QUESTION FIVE: (*Task analysis*) [20 points]

- 5.1 Describe how Task Analysis helps with the design of user interfaces? [5]
- 5.2 Discuss the importance of task analysis in the User Centred Design process. [5]
- 5.3 Cleaning house requires one to conduct some tasks. Write a hierarchical task analysis (HTA) of cleaning house. Your analysis should have both the textual presentation and the plan. Remember to present these separately. [10]