



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE

CSC 208: USER- CENTRED DEVELOPMENT AND EVALUATION

DATE: 12TH APRIL, 2017

TIME: 4.00 -6.00 PM

INSTRUCTIONS TO CANDIDATES

- a) Answer **ALL** questions from section A(Compulsory)
 - b) Answer **ANY TWO** questions from section B
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SECTION A (30 Marks) - Compulsory

Question One

- a) Differentiate between the following terms as used in User Centered Design: **[4 Marks]**
 - i) Low-fidelity and High-fidelity prototypes.
 - ii) Gulf of execution and Gulf of evaluation.
- b) In user centered design, all "development proceeds with the user as the center of focus." Explain . **[2 Marks]**
- c) Discuss four basic activities involved in the process of interaction design. **[4 Marks]**
- d i) Define the term dialog. **[1 Mark]**
 - ii) A dialog is studied at three levels. Explain these levels. **[3 Marks]**
- e) Explain three key aspects of user-centered design. **[3 Marks]**
- f) User-centered approach is based on "early focus on users and tasks." Justify this statement. **[3 Marks]**
- g) Describe participatory design approach in user centered development. **[4 Marks]**

h) The focal point of Gestalt theory is the idea of "grouping," or how we tend to interpret a visual field or problem in a certain way. Explain the four main factors that determine grouping.

[4 Marks]

i) "A software tool is a programmatic software used to create, maintain, or otherwise support other programs and applications." Explain two software tools commonly used in user centered development.

[2 Marks]

SECTION B (40 Marks): ANSWER ANY TWO QUESTIONS

Question Two

a) Compare and contrast the characteristics of the following prototyping techniques: [6 Marks]

i) Sketches

ii) Storyboards

iii) Scenarios

b) Using an example, describe the stages Donald Norman's model of interaction. [7 Marks]

c) "Contextual Design has seven parts." Explain these parts. [7 Marks]

Question Three

a) Outline any four Shneiderman's Golden Rules. [4 Marks]

b) Explain two major principles of direct manipulation. [4 Marks]

c) One of the techniques used in the usability life cycle is task analysis. In relation to task analysis, discuss the concept of GOMS. [4 Marks]

d i) Explain the term Metaphors. [2 Marks]

ii) Describe three types of metaphors. [6 Marks]

Question Four

a) With relevant examples, discuss three components of usability goals. [6 Marks]

b) Discuss the meaning of HOMERUN as described by Jakob Nielsen in explaining top quality.

[7 Marks]

c) Evaluation is concerned with gathering data about the usability of a design or product by a specified group of users for a particular activity within a specified environment or work context. There are a wide range of methods which can be used for evaluation.

i) State three typical reasons why evaluations are done. [3 Marks]

ii) Explain two of these methods which can be used. [4 Marks]