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SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
DEPARTMENT OF INFORMATION SYSTEMS AND TECHNOLOGY
UNIVERSITY EXAMINATION FOR THE DEGREE OF EDUCATION ARTS WITH
IT; EDUCATION SCIENCE WITH IT; SPECIAL NEEDS EDUCATION WITH IT;
BUSINESS ADMINISTRATION WITH IT
4TH YEAR 1ST SEMESTER 2017 / 2018 ACADEMIC YEAR
MAIN CAMPUS; KISUMU CAMPUS; KISII CAMPUS; NAMBALE LEARNING
CENTRE

COURSE CODE: SCS 416

COURSE TITLE: HUMAN COMPUTER INTERACTION

EXAM VENUE:

STREAM:

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer Question ONE (COMPULSORY) and ANY other TWO 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 (30 MARKS)

- a) Explain your understanding of the term 'Human Computer Interaction' and state the significance of 'affordance' as used in HCI. (4 Marks)
- b) Briefly explain any six factors that make software easy to learn. (6 Marks)
- c) Discuss five features of software packages that would merit the description 'user friendly'. (6 Marks)
- d) Highlight six factors that you would need to take into consideration when designing a screen layout for a database application. (6 Marks)
- e) State any six principles of User Interaction Design according to Norman. (6 Marks)
- f) Define the term 'Information Space' and state the two parts of information spaces. (2 Marks)

QUESTION TWO (20 MARKS)

An IT company has built a new stock control system for use in a certain retail store. A good number of employees in the retail store have not used computer systems before and are not ready to accept such technology hence they did not receive it well. Some of the employees have described the system as being 'user friendly'.

- a) Describe the resource implications in developing a sophisticated, user friendly system. (10 Marks)
- b) Psychological factors can influence how people interact with computer systems. They may have contributed to the poor reception of this system in that store. Describe five such psychological factors. (10 Marks)

QUESTION THREE (20 Marks)

- a) Flexibility is one of the usability principles that affect User Centered Design. Explain the meaning of the flexibility principle and discuss how it can be used to improve the aspects of User Centered Design. (10 Marks)
- b) Explain the steps involved in the User Centered Design lifecycle. (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Give **five** factors which should be considered when providing a sophisticated human computer interface, explaining the impact of each one on the system's resources. (10 Marks)
- b) A university uses a complex CAD (computer aided design) package. The package has a sophisticated human-computer interface which also places considerable demands on the system's resources. Give five examples of a system's resources that would be affected by such a package and explain the demands placed upon them. (10 Marks)

QUESTION FIVE (20 MARKS)

The choice of a user interface has been described as ‘one of the most critical areas of software consideration’. Many machines now offer a front-end GUI (Graphical User Interface) or WIMP environment.

- a) Describe the advantages of this type of interface to an average user. (10 Marks)
- b) Describe the advantages and disadvantages in the use of this type of interface to the system. (10 Marks)