MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF ENGINEERING, APPLIED SCIENCES AND TECHNOLOGY

DEPARTMENT: COMPUTER SCIENCE AND INFORMATION SYSTEMS

MODULE: PSYCHOLOGY OF COMPUTING

CODE: INSY 211

SESSIONAL EXAMINATIONS
DECEMBER-2023

DURATION: 3 HOURS

EXAMINER: MR N. MATANANA

INSTRUCTIONS

1. Each question carries 25 Marks.

2. Answer Any **four (4) questions**

3. Start a new question on a fresh page

4. Total marks 100

Additional material(s): None

Question 1

    a. Explain any **five** different types of Human computer Interfaces that exist in the world of computing   **(5 Marks)**

    b. Describe the concept of cognitive modelling in computer systems design.
    (10 Marks)

    c. Outline the role of human computer interaction in the computer systems design process   **(10 Marks)**

Question 2

    a. Outline the rationale behind the heuristic evaluation in developing a system critique   **(10 Marks)**

    b. According to rules and heuristics in computer systems, design and explain

        ➢ Shneiderman's eight golden rules of interface design.   **(8 Marks)**
        ➢ Norman's seven principals of transforming difficult tasks.   **(7 Marks)**

Question 3

Discuss the concepts of ergonomics in screen designing, paying attention to screen characteristics in line with what screen users do when interacting with a digital interface   **(25 Marks)**

Question 4

With aid of diagram outline the nature of human memory and its various types in relating to computer memory   **(25 Marks)**

Question 5

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a. Discuss the ethical considerations in the psychology of computing, including issues related to user privacy, trust, and addiction. **(9 Marks)**

b. Compare and contrast different theories and models of user behavior in the context of computing, such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT).**(8 Marks)**

c. Explain the role of psychology in the development of information technology. Provide examples of how psychological principles have influenced the design and usability of digital interfaces. **(8 Marks)**

Question 6

a. How does cognitive science contribute to advancements in information technologies? Discuss at least two cognitive processes and explain their relevance to human-computer interaction. **(7 Marks)**

b. Define Human-Computer Interaction (HCI) and elaborate on its significance in technology design. Provide a real-world example of a well-designed interface that considers user-centered principles. **(8 Marks)**

c. Discuss how can psychology contribute to the design of digital detox programs and technologies that promote healthier relationships with digital devices? Provide examples of effective approaches. **(10 Marks)**

END OF EXAMINATION