OLABISI ONABANJO UNIVERSITY,AGO IWOYE
DEPARTMENT OF MATHEMATICAL SCIENCES
B.Sc. DEGREE EXAMINATIONS (400LEVEL)

COURSE CODE/TITLE: CMP 415- HUMAN COMPUTER INTERACTION
INSTRUCTIONS: ANSWER ANY FORU QUESTIONS
TIME ALLOWED: 2 HOURS

---

1. Using the following formats of *Abstract, Introduction, Literature review, Aim and objective of the design, Methodology, Expectation of the user and Conclusion, and References;* give the report of a computer project design you were involved in.
   i. Describe a typical activity in which the user interacts with the information structure presented in your design
   ii. Describe how you would carry out an investigation to evaluate those activities
   iii. How would you classify the method(s) you have described

2a. If you had been one of the original investors of the WIMP interface design, and engineers on the technical team had been skeptical about the advantages that the design would bring, then
   i. What two pieces of empirical evidence could you have presented to skeptics in order to help convince them
   ii. Describe the technique that you would be used to collect data for each of these and analyze each of those data

b. If you were the HCI researcher on a speech interaction project intended to replace the WIMP interface, then
   i. Which of the techniques described above would be most relevant to your work? and Why?
   ii. Explain how a modern analytic evaluation method could give design guidance to the team, including a description of how the analysis would be conducted, and two design improvements that might result from that analysis

c. Describe briefly two of the limitations of using voice as an input to an information system

3. In evaluating the design of a university-wide student information system for OOU, it is necessary to meet the usability requirements of various group, including (among others)

   (i.) staff working in the university and (ii.) people applying for online for admission as graduate students

   a. In what respects would the evaluation techniques of these two groups be likely to differ
   b. Which evaluation technique methods would provide most insight into typical usage scenarios for each of these two groups. For each method, explain the reason why it would be appropriate, and also the analysis procedures that should be followed
   c. Draw a guide on either heuristic evaluation, cognitive dimensions of notations, or relevant components of both, suggest three specific interaction features that might address the needs of these different users.
   d. Experimental studies on subject groups are more difficult than single user experiments; what are the specific groups to justify this statement.

4a. Inventing new techniques and comparing exiting techniques using the scientific method will enhance efficient interaction techniques for common computing tasks. Discuss five (5) ways to achieve this (5marks)
   bi. What is user system interface
   ii. List four different ways in which an interface designer can help the user manage their attention
   iii. Distinguish between:
      a. User system interface and user interface software
      b. Information systems and interface users
      c. User's and designer's mental model of an interactive system

5ai In designing computer based information system Norman designed principles talks about knowledge in the world and knowledge in the head. List and discuss every step of these principles could be considered in designing systems you have studied
   ii. Describe how every step in the designed principles can be used to support usability
   b. List out any three (3) of the *Shneiderman's* eight (8) Golden rules that govern interactive design

6ai. Explain the value of usability engineering in the software design process
   ii. Give two major problems associated with usability specification
   iii. Give any three (3) examples of a usability specification
   bi. Differentiate between the objectives of interactive design and prototyping
   ii. What are the management issues concerned with interactive design and prototyping