



CRAWFORD UNIVERSITY FAITH CITY IGBESA
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER AND MATHEMATICAL SCIENCES
COURSE CODE: CSC/ICT 306 COURSE TITLE: HUMAN COMPUTER INTERACTION
SESSION: 2022/2023 TIME: 2½ HOURS

Instruction:

Answer Question One and any other Three

Question One

Part 1

- a. Define the term HCI and state three (3) factors that affect the analysis and design of HCI principles 5marks
- b. Differentiate between real and perceived affordances with an example each 2marks
- c. What are mappings? State the different types of mappings 3marks
- d. Explain why constraints are essential in design, and list the types of constraints that can be attached to a design 5marks

Part 2

Choose either I or II

I. An educational institution is planning to implement a new learning management system (LMS) for its students and teachers. The project team is following a traditional life cycle, with a strong focus on system architecture and data management. How can we involve students and teachers in the design and evaluation of the LMS to ensure that it offers an intuitive and user-friendly interface, aligns with their education needs, and promote an engaging learning experience, rather than solely focusing on technical aspects? 15marks

II. A transportation company is developing a mobile app for booking rides. The development team is following a traditional life cycle, with a focus on backend system integration and data management. How can we ensure that the mobile app provides a seamless and intuitive user experience, considering factors such as ease of booking, real-time tracking, and clear communication, in addition to the technical aspects of integrating with the backend systems? 15marks

Question Two

- a. What is ubiquitous computing, and how does it differ from traditional computing paradigms? 2marks
- b. List out three (3) examples of ubiquitous computing in practice, and how do they benefit users? 6marks
- c. Mention two (2) challenges associated with designing and implementing ubiquitous computing systems? 2marks

Question Three

- a. What is groupware, and how does it support collaboration among groups of people? 3marks
- b. Mention five (5) benefits of using groupware for collaboration? 5marks
- c. How can we evaluate the effectiveness of groupware, both in terms of user satisfaction? 2marks

Question Four

- a. Define Virtual Reality (VR) and Augmented Reality (AR). 3marks
- b. Discuss at least two (2) current trends and innovations in VR and AR 5marks
- c. What are the ethical concerns surrounding the use of VR and AR 2marks

Question Five

- a. What is the role of Hypertext and Multimedia in supporting user-centered design 2marks
- b. Explain the use of Hypertext and Multimedia in e-learning and educational contexts, including benefits and limitations for learners and instructors. 6marks
- c. List two (2) challenges and ethical concerns surrounding the use of Hypertext and Multimedia. 2marks

Question Six

- a. Define Cognitive Models in relation to HCI. 2marks
- b. Explain the different types of Cognitive Models you know 6marks
- c. Mention two (2) ethical and social implications of Cognitive Models 2marks