



CRAWFORD UNIVERSITY, FAITH CITY IGBESA
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER AND MATHEMATICAL SCIENCES

Bachelor of Science Degree in Computer Science and Technology

HARMATTAN SEMESTER EXAMINATION

SESSION: 2022/2023

COURSE CODE: CSC 411 (NET-CENTRIC COMPUTING)

UNITS: 3

DURATION: 2 HOURS

INSTRUCTION: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER THREE QUESTIONS.

QUESTION ONE (30 marks)

- (A) (i) Briefly discuss the concept of Net-centric Computing. How does it represent the future of computing? (4mrks)
(ii) Discuss any five (5) key characteristics of distributed computing systems (5mrks)
(iii) Briefly discuss Multiple Access techniques for wireless systems (3mrks)
- (B) (i) Distributed transactions, as any other transactions, must have four ACID properties. Discuss (4mrks)
(ii) Distributed systems generally consist of four different basic architectural models. Discuss (4mrks)
- (C) Enterprise networks encounter varying degrees of threats, and therefore should be prepared to identify and respond to a full range of attacks. Briefly discuss ten (10) different network security tools and techniques designed for that. (10mrks)

QUESTION TWO (10 marks)

- (A) (i) Briefly explain how Distributed Objects work (3mrks)
(ii) Identify any three (3) Distributed Object Systems/Protocols (3mrks)
- (B) Discuss Local versus Distributed Objects (4mrks)

QUESTION THREE (10 marks)

- (A) Briefly discuss the steps you may follow in building a web application (6mrks)
- (B) Write short notes on the following: (2mrks)
- VPN (2mrks)
 - API (2mrks)

QUESTION FOUR (10 marks)

- (A) Suggest practical solutions to any three (3) identified threats in the usage of Mobile and Cloud computing (6mrks)
- (B) Discuss the advantages and disadvantages of Mobile and Cloud computing (4mrks)

QUESTION FIVE (10 marks)

- (A) Discuss the following briefly: (2mrks)
- Sockets (2mrks)
 - Proxy Server (3mrks)
 - WLAN modes (3mrks)
- (B) Discuss the three (3) major strategies that constitute the focus of network security (3mrks)

QUESTION SIX (10 marks)

- (A) Briefly describe four (4) main categories of security attacks that generally occur on networks (4mrks)
- (B) Differentiate between: (2mrks)
- Static and Dynamic web (2mrks)
 - Proxy server and VPN (2mrks)
 - Wireless and Mobile (2mrks)