

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN COMPUTER SCIENCE

COSC 00171: NETWORKS AND INTERNET

STREAMS: DIP. COMP SCI Y1S2

TIME: 2 HOURS

DAY/DATE: THURSDAY 8/08/2019

8.30 A.M - 10.30 A.M.

INSTRUCTIONS:

- Answer question **ONE** and **TWO** other questions
- Do not write anything on the question paper
- This is a **closed book exam**, No reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely.
- Marks are awarded for clear and concise answers.

SECTION A (ANSWER ALL QUESTIONS IN THIS SECTION)

QUESTION ONE (30 MARKS)

- Explain the term Computer Network (3 Marks)
- While stating what they stand for, explain the difference between CAN, PAN and LAN. (6 Marks)
- Distinguish between the Internet Address System and the Domain Name System (2 Marks)
- Briefly state THREE ways of accessing resources from websites. (3 Marks)
- Differentiate internet, intranet and extranet. (6 Marks)
- Distinguish between spamming and phishing (4 Marks)
- While stating what they stand for, explain the role of each of the following: (6 Marks)
 - FTP

- a.ii. HTTP
- a.iii. SMTP

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO (20 MARKS)

a.) Explain the role of the following devices in a network. (12 Marks)

- a.i. Switch
- a.ii. Hub
- a.iii. Router
- a.iv. Bridge

b.) Using a diagram, explain the client/server model. (4 Marks)

c.) List FOUR advantages of computer networks (4 Marks)

QUESTION THREE (20 MARKS)

- a. State and explain FIVE types of attacks that can occur in a computer network (10 Marks)
- b. State and explain FIVE types of network security implementations (10 Marks)

QUESTION FOUR (20 MARKS)

- a. Describe the layers of the Open Systems Interconnection (OSI) Model (14 Marks)
- b. While stating what they stand for, distinguish between TCP and UDP (6 Marks)

QUESTION FIVE (20 MARKS)

- a. List any FOUR **main** uses of the Internet. (4 Marks)
 - b. With the aid of diagrams, explain each of the following network topologies (6 Marks)
 - a.i. Mesh Topology
 - a.ii. Bus Topology
 - a.iii. Star Topology
 - a.iv. Hybrid Topology
 - c. With the aid of a diagram, explain the role of a firewall in a computer network (4 Marks)
 - d. With the aid of a diagram, explain the process of packet switching (6 marks)
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