



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
DEPARTMENT OF COMPUTER SCIENCE & SOFTWARE ENGINEERING
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
BIOLOGICAL SCIENCES
2ND YEAR 1ST SEMESTER 2015/2016 ACADEMIC YEAR
MAIN CAMPUS

COURSE CODE: SCS 3231

TITLE: DATA COMMUNICATION AND NETWORKS

COURSE EXAM VENUE:

STREAM:

DATE:

EXAM SESSION:

TIME: 2HRS

INSTRUCTIONS

- 1. Answer ONE (COMPULSARY) and ANY TWO questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

QUESTION 1 [30 MARKS]

- a. What is e-mail? Describe the characteristics. (3marks)
- b. What is a ICT? Define it precisely. (2marks)
- c. What is the main difference between Communication and transmission (4marks)
- d. What is network topology? (2marks)
- e. Briefly describe five benefits of computer Networks (5marks)
- f. Distinguish between different types of networks (5marks)
- g. Describe Human and Computer interface (HCI) (5marks)
- h. Name and briefly describe the smallest geographical network classification, also considered the building block when creating larger networks. (4marks)

QUESTION 2 [20 MARKS]

- a. Briefly describe five benefits of computer Networks (5marks)
- b. Distinguish between different types of networks (5marks)
- c. Describe Human and Computer Network (5marks)
- d. Name and briefly describe the smallest geographical network classification, also considered the building block when creating larger networks. (5marks)

QUESTION 3 [20 MARKS]

- a. What name is given to a computer operating independently from other computers (2marks)
- b. Explain the following Data Communication terms: Client, WAN, MAN, Server LAN, Peer-To-Peer (12marks)
- c. Name and briefly explain a computer Network where all computers are considered equal with no one computer in charge (3marks)

- d. Outline three challenges organizations without Computer networks are experiencing (3marks)

QUESTION 4 [20 MARKS]

- a. What is the main difference between Communication and transmission (5 marks)
- b. Describe what Internet is all about stating its benefits to your studies and later in your career. (10 marks)
- c. Briefly describe issues/challenges surrounding the use of Internet use (5 marks)

QUESTION 5 [20 MARKS]

- a. d. Briefly describe some of the factors that would make you avoid putting your data to into data networks and Internet (5marks)
- b. State and briefly describe major strategic advantages of a research Institution using using data communication Networks will have over non connected ones. (8marks)
- c. What is meant by Data Communication and explain its characteristics? (2marks)
- d. Explain three different types of topologies used in data communications and networks. (5marks)