



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2015/2016**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE  
DEGREE OF BACHELOR OF EDUCATION WITH  
INFORMATION TECHNOLOGY**

**CITY CAMPUS-SCHOOL BASED**

**UCI 102: COMPUTER COMMUNICATION SYSTEMS**

Date: 11<sup>th</sup> February, 2016

Time: 8.00 - 10.00 am

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**INSTRUCTIONS:**

- SECTION A: Attempt question ONE which is compulsory (30 marks)
- SECTION B: Attempt any TWO questions (20 marks each)
- Start each question on a new page
- Mobile phones WHETHER ON OR OFF are prohibited in the Examination room

**QUESTION ONE (30 MARKS)**

- (a) Computer networks, based on geographical coverage, can be categorized into three categories; Name them and discuss their distinguishing factors. (8marks)
- (b) Differentiate and using examples between guided and unguided transmission media(4 marks)
- (c) The term transmission mode is used to define the direction of the signal flow between two linked devices, with the diagrams Explain the three data transmission models(6 marks)
- (d) State and Explain FOUR components of a network system.(8marks)
- (e) Define the following terms as used in networking(4 marks)
- i) Client
  - ii) Server
  - iii) Protocol
  - iv) Peer

**QUESTION TWO (20 MARKS)**

- (a) State and explain any TWO factors that should be considered before setting up a network.[4 Marks]
- (b) State any FOUR duties performed by network administrators.[4 Marks]
- (c) Name and Explain any TWO factors considered in the choice of transmission media(4 Marks).
- (d) Discuss Any FIVE Benefits Of Networking Computers (5 marks)
- (e) Explain any THREE applications of the Internet (5 marks)

**QUESTION THREE (20 MARKS)**

- a) The way in which the connections are made among all the computers is called the topology of the network. With the aid of diagrams, discuss how the following topologies work stating their strengths and weaknesses(16 marks)
- i) Bus
  - ii) Star
  - iii) Ring
  - iv) Mesh
- (b) What are the factors that have led to emergence of Optical Fiber as popular Data Transmission medium being deployed throughout Nairobi and its environments by most internet service providers. [4Marks]

**QUESTION FOUR (20 MARKS)**

(a) Discuss any three WIRED transmission media. (12 marks)

(b) Discuss FOUR Applications of Computer Networks a modern office setup (8 Marks)

**QUESTION FIVE (20 MARKS)**

(a) Describe the following Network services; (14 marks)

- (i) E-Mail,
- (ii) Voice over IP,
- (iii) Instant messaging;
- (iv) File Sharing,
- (v) Directory services,
- (vi) Printing
- (vii) Internet

(b) Explain any six demerits of networking computers (6 marks)