

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**THIRD YEAR EXAMINATIONS FOR THE AWARD OF  
BACHELOR OF COMMERCE (MANAGEMENT SCIENCE)**

**BCOM 370: DATA COMMUNICATIONS**

**STREAMS: BCOM Y3**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 23/4/2013**

**2.30 PM – 4.30 PM**

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**INSTRUCTIONS:**

- Answer question ONE and any other TWO questions
- Marks are awarded for clear and concise answers.

**QUESTION ONE**

- (a) Give a brief description of the following data communication concepts [10 Marks]
- Data Encryption
  - Data Compression
  - Error detection
  - Attenuation
  - Handshaking
- (b) Give three advantages of digital signal over analogue signal [3 Marks]
- (c) Give a brief description of two types of unguided media. [4 Marks]
- (d) Give three differences and one similarity between optical fiber and twisted pair cable. [4 Marks]
- (e) Give two ways that companies can use internet to create customer loyalty. [4 Marks]

- (f) While giving examples in each, differentiate between a Local area network and Wide area network. [4 Marks]
- (g) What do you understand from the term Bluetooth in relation to data communication. [1 Mark]

### **QUESTION TWO (20 MARKS)**

- (a) Suggest three ways on how a small business enterprise dealing with perishable products can use a mobile phone and related technology to cut operation costs. [6 Marks]
- (b) What is the role of the following networking components. [6 Marks]
- (i) Switch
  - (ii) Router
  - (iii) Network card
- (c) Differentiate between an intelligent terminal and dumb terminal. [4 Marks]
- (d) What is a server. Give any two servers that can be deployed in a network. [4 Marks]

### **QUESTION THREE**

- (a) You have recently been employed by a company called Freecom ltd. Since it is a start up company with few employees and no network administrator, you have been charged with the responsibility of managing the network... explain how the installation of LAN will affect operations in the institution. [6 Marks]
- (b) Briefly discuss four advantages of internet if adopted by the government in provision of services. [4 Marks]
- (c) While giving examples give three resources that can be shared in a network. [6 Marks]
- (d) Using suitable scenarios differentiate between extranet and intranet. [4 Marks]

### **QUESTION FOUR (20 MARKS)**

- (a) Communication media refers to the path followed by a signal during transmission. Briefly describe three types of guided media. [6 Marks]
- (b) Give three standards implemented using radio link. [3 Marks]
- (c) Give one similarity and two differences between terrestrial microwave and satellite. [6 Marks]
- (d) Give two advantages of Bluetooth radio and three advantages of wireless LAN.

[5 Marks]

**QUESTION FIVE (20 MARKS)**

- (a) Give three challenges that an organization has to deal with after implementing a local area network. [3 Marks]
- (b) While citing relevant examples briefly explain how computer networks have improved the services offered by banking institutions. [6 Marks]
- (c) What do you understand from the following terms related to information security in a network. [8 Marks]
- (i) Confidentiality
  - (ii) Integrity
  - (iii) Availability
  - (iv) Hacking
- (d) Why are passwords relevant when using networked resources. [3 Marks]
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