



GRETSA UNIVERSITY - THIKA

UNIVERSITY EXAMINATIONS JANUARY – APRIL 2017 SEMESTER

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

COURSE CODE: BSCS 206

COURSE TITLE: INTRODUCTION TO INTERNET TECHNOLOGIES

DATE: 4 APRIL 2017

TIME: 11.30 AM – 2.30 PM

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

SECTION A: COMPULSORY

QUESTION ONE (40 MARKS).

- a) Discuss the following Terms **[3]**
- i) Internet.
 - ii) Intranet.
 - iii) Extranet.
- b) Distinguish between WWW and Internet. **[4]**
- c) Discuss any three Email Protocols used in the Internet. **[6]**
- d) Wireless Network have become very common to both Organization and individuals. A Key Concern has been wireless Security which is the prevention of unauthorized access or damage to Computers using wireless network .Discuss any three Security threats that a wireless network is considered Vulnerable to. **[8]**
- Using the following URL. List to explain the domain name parts.
- i) www.openuniversity.edu
 - ii) www.google.com **[6]**
 - iii) www.gretsa university.ac.ke
 - iv) www.itax.kra.go.ke
- e) Differentiate between Email Server and Email chat. **[4]**

SECTION B: ANSWER ANY OTHER THREE QUESTIONS

QUESTION TWO (20 MARKS)

- a) There are three Common wiring Implementation for Bus Networks. State and explain them. [6]
- b) Name explain any three bus topologies and State two Advantages and disadvantages of each topology [8]
- c) Discuss three Considerations that should be made when selecting a medium for data Transmission. [6]

QUESTION THREE (20 MARKS)

- a) Infrared frequencies are just below Visible light .These High Frequencies allow High Speed Data Transmission .This Technology is similar to the Use of a remote Control for a TV .Infrared Transmission can be affected by Object obstructing Sender and Receiver. These Transmission fall into Two Categories.
 - i) Distinguish between point to point and Broadcast Transmission Techniques used in Infrared Transmission . [7]
 - ii) Highlight any Four Disadvantages of Infrared as a form of Wireless Transmission Medium.
- b) Briefly Discuss the Distinguishing features of a (LAN) and a Wide Area Network (WAN). [6]
- c) Describe the following Network Topologies Using relevant Diagrams Giving Advantages and disadvantages of each topologies. [7]

QUESTION FOUR (20 MARKS)

- a) Network Protocols are Critical Components of Data Transmission System and Computer Networks .The most Notable Suite of Protocol being TCP/ IP.
 - i) Highlight any three characteristics of TCP /IP.
 - ii) List Any Two Protocols in TCP/IP Suite. [8]
 - iii) List Four Layers of TCP/IP Protocol Suite.
- b) Differentiate between channel through put and Latency as Used in the Context of Data Transmission. [6]

c) Write Short Notes on the Function of the following Networking Components .

i) N.I.C Card. [7]

ii) Router.

iii) Switch.

iv) Modem.

v) Server.

QUESTION FIVE (20 MARKS)

a) Name and Explain any Three Bus Topologies and State two Advantages and Disadvantages of each Topologies. [6]

b) Differentiate between Guided and unguided Transmission Media, Give two Examples in each case . [4]

c) Using a well labeled diagram, Draw a Sketch of a Complete Communication system describing each of the Components. [6]

d) Discuss two limitations of using network technologies in an Organization [4]

END OF EXAMINATION