



*(University of Choice)*

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2022/2023 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER EXAMINATIONS  
FOR THE DEGREE  
OF**

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**COURSE CODE: BIT 214**

**COURSE TITLE: WEB SYSTEMS AND TECHNOLOGIES 1**

**DATE: 06/12/2022**

**TIME: 08:00-10:00AM**

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**INSTRUCTIONS TO CANDIDATES**

Question ONE (1) is compulsory  
Answer TWO (2) questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

## QUESTION ONE

- (a) Briefly explain the function of a modem in data communication. (4 marks)
- (a) Briefly explain the following types of networks
- (i) WAN
  - (ii) MAN
  - (i) LAN (9 marks)
- (b) Given an email address john@hotmail.com, explain the components of this email address. (4 marks)
- (c) What services does the internet offer to the modern society and the globe. (4 marks)
- (d) Give a brief history of the development of the internet. (4 marks)
- (e) There are various types of connectivity to get hooked to the internet. State and explain **Four** of these facilities needed in order to get connected to the internet. (5 marks)

## QUESTION TWO

- (a) The following are some alternatives for communication, internal and external to organizations.
- (i) Internet
  - (ii) Intranet
  - (iii) Extranet

Write short notes on ALL of these headings indicating their main features and explaining how they might be used by an organization for business communication (12 marks)

- (b) (i) Describe the structure of a html document (4 marks)
- (ii) Describe the classification of html tags with examples. (2 marks)
- (c) List the functions of the server and the client. (2 marks)

## QUESTION THREE

- (a) State and explain any Five services offered on the internet. (10 marks)
- (b) When developing websites, it is advisable not to incorporate too many graphics and objects. True/False? Explain. (4 marks)
- (c) Explain the term protocol. (2 marks)

(d) Explain the difference between TCP/IP connection and Shell connection. (4 marks)

#### QUESTION FOUR

(a) Some of the most frequently used protocols include:

- (i) FTP
- (ii) SMTP
- (iii) HTTP

Explain the uses of these protocols. (9 marks)

(b) With the growth of the internet, electronic mail services are rapidly replacing ordinary mail services. Describe the features of an E-mail service which make it more efficient than the ordinary mail service. (5 marks)

(c) Differentiate between the following: (6 marks)

- (i) Web server and web browser
- (ii) Website and web page
- (iii) Gopher and telnet

#### QUESTION FIVE

(a) List and fully describe at least five ways in which internet privacy can be enhanced. (10 marks)

(b) Briefly explain the need of an e-mail address in our modern societies and technology. (6 marks)

(c) Outline the basic steps required for a TELNET session (4 marks)

(d) Explain how a web page can be displayed. (4marks)

(e) Write a HTML code that would display the following list in a browser window.

(10 marks)

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(c) Explain the following terms as used in Web development:

(6 marks)

- i. Domain name
- ii. URL
- iii. Scripting
- iv. HTML