



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2024/2025

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE BACHELOR OF SCIENCE IN DATA SCIENCE, BACHELOR OF SCIENCE IN COMPUTER SCIENCE, BACHELOR OF SCIENCE IN COMPUTER TECHNOLOGY, BACHELOR OF SCIENCE IN COMPUTER SECURITY AND FORENSICS, BACHELOR OF EDUCATION (MATHS/COMPUTER STUDIES), (COMPUTER/PE), (COMPUTER/GEOGRAPHY), (PHYSICS/COMPUTER STUDIES)

### CIT 3103: FUNDAMENTALS OF INTERNET

DATE: JANUARY 2025

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

#### QUESTION ONE (30 MARKS)

- a) Define the following terms
- i) Internet [1 mark]
  - ii) Search engines [1 mark]
  - iii) Networks [1 mark]
  - iv) Web Browser [1 mark]
- b) Briefly explain the evolution of the internet citing the key milestones [3 marks]
- c) Describe google suite and explain three services offered by it as far as your university academic life is concerned [4 marks]

- d) Describe the structure of an HTML table including the purpose of each tag involved  
[5 Marks]
- e) Write the HTML code that creates a form with different input types including text, radio buttons, checkboxes, and a submit button  
[6 Marks]
- f) Discuss any TWO (2) security internet issues  
[2 Marks]
- g) With help of illustrations, discuss THREE (3) different types of network topologies  
[6 Marks]

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

- a) Discuss the concept of "cyberbullying" showing its potential impact on individuals and citing measures that can be taken to prevent and address cyberbullying  
[5 marks]
- b) State TWO (2) basic HTML rules  
[2 marks]
- c) Using an example, briefly explain what is URL and describe its structure showing the three important parts of a URL  
[4 marks]
- d) Using a diagram, describe the client server computing model in relation to how internet browser works  
[4 marks]
- e) Discuss how ransomware attacks can affect organizations and individuals, and show the steps that can be taken to mitigate the risks of ransomware  
[5 marks]

## **QUESTION THREE (20 MARKS)**

- a) Using examples describe web development tools and give their roles in creating websites  
[5 marks]
- b) Differentiate between HTTP and HTTPS citing the importance of HTTPS for secure communication.  
[2 Marks]
- c) Describe the steps to create a new email account with a popular email provider citing the information that is typically required  
[5 Marks]
- e) Briefly explain THREE (3) services that have been facilitated by internet while doing your assignment  
[6 Marks]

- f) Give any TWO (2) types of separator tags used when designing a web page in HTML [2 marks]

**QUESTION FOUR (20 MARKS)**

- a) Write the Importance of the following terms as use when composing an email (2 marks)
- i. BCC
  - ii. CC
- b) State and briefly explain any two network configurations that an organization like Safaricom can apply to aid internet communication [4 Marks]
- c) Open system interconnection reference model (OSI Reference model), splits communication system into seven layers and each layer performs their task and passes the data to the next layer. In brief, describe the seven layers of OSI reference model [7 marks]
- d) Discuss the purpose of the following tags as used in HTML [4 marks]
- i. <div>
  - ii. <img>
  - iii. <a href>
  - iv. <input>
- e) Describe the purpose of the following as used in forms
- i) Radio Buttons [1 mark]
  - ii) Check Boxes [1 mark]
  - iii) Drop Down Boxes [1 mark]

**QUESTION FIVE (20 MARKS)**

- a) You are using the internet to do online shopping; you visit a website that tells you that it is using cookies. Explain what is meant by the term cookies and give two uses of cookies in a website. [4 Marks]
- b) Write a HTML tag to insert a picture called pic.gif to a web page [4 Marks]
- c) Define e-learning and discuss its main advantages over traditional classroom-based learning [6 Marks]
- d) You are appointed as new web administrator for Meru University of Science and Technology, you are tasked with designing and customizing the university website to

attract more clients. Discuss three factors that you will consider before designing the website [6 Marks]