



KENYATTA UNIVERSITY
DIGITAL SCHOOL OF VIRTUAL AND OPEN LEARNING (DSVOL)
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
INFORMATION TECHNOLOGY

SIT 109: INTRODUCTION TO INTERNET TECHNOLOGIES

2ND TRIMESTER 2023/2024

TIME: 2 HOURS

INSTRUCTIONS: ATTEMPT QUESTION ONE AND ANY OTHER TWO QUESTIONS.

QUESTION ONE

a) Define the following terms:

- | | |
|---------------|----------|
| i) Malware | (2 mark) |
| ii) Trojan | (2 mark) |
| iii) Spyware | (2 mark) |
| iv) Phishing | (2 mark) |
| v) Encryption | (2 mark) |

b) Explain the difference between a network and an Internet using a well labeled diagram?

(5 marks)

c) Using a well labeled diagram, discuss the the need of an Internet gateway.

(6 marks)

d) How does ICT help the government in providing services to the citizen? How does such services help the common man?

(5 marks)

e) Explain why cyber attack is a concern in the Internet and discuss three strategies that are use to overcome cyber threats

(5 marks)

QUESTION TWO

- a. Differentiate between connected oriented communication and connectionless communication and give one example where each of these communication approaches are used,

(10 marks)

- b. Explain the functionalities of a firewall and list five benefits of a firewall to internet technology (10 marks)

QUESTION THREE

- a. Using a diagram explain the functionalities of Tier 1 ISP (10 marks)
- b. Discuss **FIVE** principles of web accessibility and usability (10 marks)

QUESTION FOUR

- a. Explain the process of Denial of Service (DoS) security threat in a network (6 marks)
- b. Using a well labeled diagram, explain how Tier 1, Tier 2 and Tier 1 networks are connected in the Internet (14 marks)

QUESTION FIVE

- a. Discuss a HTML tag and give two examples of HTML tags (6 marks)
- b. Write a HTML tag to display a value (6 marks)
- c. Using a well labeled diagram explain your understanding of OSI reference model. (8 marks)