



TECHNICAL UNIVERSITY OF MOMBASA

School of Humanities and Social Sciences

Social Sciences

**UNIVERSITY EXAMINATION FOR:
BACHELOR OF INFORMATION SCIENCE
HIS 4309: INFORMATION SECURITY**

SERIES: MAY 2025

TIME: 2 HOURS

DATE: 18May 2025

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- i. Explain FIVE major elements in which form the basis of information security (10 Marks)
- ii. Explain FIVE types of malicious codes which pose a threat to information (10 Marks)
- iii. Discuss two categories of vital records citing relevant examples (10 Marks)

Question TWO

- i. Discuss why understanding the physical properties of record media is integral in administrative control of records. (10 Marks)
- ii. Describe the activities involved in transitioning to a new vendor during offsite storage of records (10 Marks)

Question THREE

- i. Explain FIVE benefits that accrue from applying role-based access control to records. (10 Marks)
- ii. Highlight the benefits of implementing multi factor authentication (MFA) as a measure of protecting information (10 Marks)

Question FOUR

- i. Discuss FIVE key principles of cryptography as a records protection measure. (10 Marks)
- ii. Describe at least Five key areas for consideration in software security. (10 Marks)

Question FIVE

- i. Describe four levels of physical security aimed at protecting information and its facilities (10 Marks)
- ii. Discuss measures that an information center can have in preparation for disaster eventuality. (10 Marks)