



# MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

## FACULTY OF ENGINEERING, APPLIED SCIENCES AND TECHNOLOGY

DEPARTMENT: COMPUTER SCIENCE AND INFORMATION SYSTEMS

MODULE: INTRODUCTION TO INFORMATION SECURITY

CODE: CSFC111

SESSIONAL EXAMINATIONS  
JUNE 2024

DURATION: 3 HOURS

EXAMINER: MR. M. MUSARA

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### INSTRUCTIONS TO CANDIDATES:

- This question paper contains a total of **FIVE** questions.
- Each question carries **25** marks
- Answer **any FOUR** questions
- Start a new question on a fresh page

**ADDITIONAL MATERIAL: None**

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## QUESTION 1

- a) Define the following terms clearly:
- i) Information security. [2]
  - ii) Asset. [2]
  - iii) Attack. [2]
- b) Distinguish any three (3) types of social engineering attacks and their possible counter measures. [9]
- c) Explain any three (3) information security characteristics and the techniques that are used to achieve them for data protection. [10]

## QUESTION 2

- a) Explain any six (6) categories of threats to an organisation's people, information and systems. [12]
- b) Describe physical security measures that can be employed to protect organisation's information assets. [10]
- c) Outline the difference between a policy and a procedure. [3]

## QUESTION 3

- a) Define the following terms.
- i. Risk appetite. [2]
  - ii. Residual risk [2]
  - iii. Zero tolerance risk exposure [2]
  - iv. Risk identification. [2]
  - v. Threat. [2]
- b) State and explain the three (3) general categories of information security policies. Describe the components under each category. [15]

#### **QUESTION 4**

- a) Evaluate the various Intrusion Detection and Prevention Systems (IDPS) detection methods. **[12]**
- b) Highlight the advantages and disadvantages of Host Intrusion Detection and Prevention Systems (HIDS). **[8]**
- c) Explain why port scanning is important and what measures can be taken to prevent attackers from compromising systems by exploiting open ports. **[5]**

#### **QUESTION 5**

- a) With the aid of a diagram, describe the bull's eye model and how it used to evaluate the needs for an information security project. **[10]**
- b) Explain the duties of the following positions related to information security.
  - i) Chief Information Security Officer. **[4]**
  - ii) Information security manager. **[3]**
  - iii) Information Security Engineer. **[3]**
- c) Highlight why SETA is an important part of on-the-job training. **[5]**

\*\*\*\*\***END OF PAPER**\*\*\*\*\*