



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF COMMUNICATION AND INFORMATION SCIENCE**

**DEPARTMENT OF RECORDS AND ARCHIVES MANAGEMENT**

**INFORMATION SECURITY**

**IIM 2102**

**SPECIAL EXAMINATION**

**APRIL 2025**

This examination paper consists of 2 pages

**Time Allowed: 3 hours**

**Total Marks: 100**

**Examiner's Name: Mr C.T. Mutare**

**INSTRUCTIONS**

1. Answer **any four** questions.
2. Each question carries **25** marks.

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25

1. With reference to Information Security, describe the components of an information system. **[25 marks]**
  
2. Explore the five (5) pillars of information security **[25 marks]**
  
3. Identify any five (5) cyber attacks, explain the threat indicators and suggest the possible actions you may take to protect your information in the event of each attack. **[25 marks]**
  
4.
  - a) Compare authentication and authorization **[10 marks]**
  - b) State and describe the three (3) authentication factors **[9 marks]**
  - c) Evaluate the use of Single Sign On (SSO) authentication. **[6 marks]****[Total 25 marks]**
  
5. Explain the following types of access controls:
  - i) Deterrent **[5 marks]**
  - ii) Preventive **[5 marks]**
  - iii) Detective **[5 marks]**
  - iv) Compensating **[5 marks]**
  - v) Corrective. **[5 marks]****[Total 25 marks]**
  
6. Describe the functionality of Symmetric key cryptography, exploring its weaknesses, and suggest how Asymmetric key cryptography functions as a solution to those weaknesses. **[25 marks]**

**END OF PAPER**