



**COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND  
GOVERNANCE**

**CIS207 Fundamentals of Information Security**

**END OF FIRST SEMESTER EXAMINATIONS**

**NOVEMBER 2018**

**LECTURER: MR S. MUGIJIMA**

**DURATION: 3 HOURS**

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***INSTRUCTIONS***

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Answer all Questions in Section A and **any three questions from Section B**  
Total possible mark is 100

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Start **each** question on a new page in your answer Booklet.

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The marks allocated to **each** question are shown at the end of the section.

## SECTION A: ANSWER

### QUESTION 1

- (a) Identify and explain 5 aspects to security threat modeling and identify mitigating strategies **(15 marks)**
- (b) Explain the common security policies such as:
  - i. BLP **(5 marks)**
  - ii. Biba model **(5 marks)**
- (c) Explain the difference among worm, Trojan and a virus **(10 marks)**
- (d) Justify the need for web security for an organisation of your choice **(5 marks)**

## SECTION B

**Answer any three questions**

### QUESTION 2

- (a) Explain the following terms as used in Information security
  - i. preventive controls **(3 marks)**
  - ii. detective controls **(3 marks)**
  - iii. corrective controls **(3 marks)**
  - iv. non-repudiation **(3 marks)**
  - v. encryption **(3 marks)**
- (b) Using practical example, define the term cryptography **(5 marks)**

### QUESTION 3

- (a) Briefly explain the following information security terms:
  - i. information flow theory **(3 marks)**
  - ii. network intrusion detection **(3 marks)**
  - iii. legal and ethical issues in computer security **(3 marks)**
- (b) Explain the advantages for an organisation in coming up with a computer security policy. **(6 marks)**
- (c) Why is it difficult to implement unbreakable computer security measures in a wireless ad-hoc network than in networked computer systems? **(5 marks)**

#### **QUESTION 4**

- (a) Identify and explain the security life cycle **(6 marks)**
- (b) Describe how attackers gain information about the targets, and describe methods to reduce disclosure of revealing information **(8 marks)**
- (c) Explain the concept operating system security **(6 marks)**

#### **QUESTION 5**

- (a) Define the term Information security and explain its fundamental characteristics **( 10 marks)**
- (b) Discuss the various authentication methods that can be used on information security **(10 marks)**

**THE END**