



**FINAL EXAMINATION
SEPTEMBER 2018 SEMESTER**

SUBJECT CODE : COP612
SUBJECT NAME : OPERATIONS AND PHYSICAL SECURITY
LEVEL : MASTER'S DEGREE
TIME / DURATION : 2.00 PM - 5.00 PM
(3 HOURS)
DATE : 5 JANUARY 2019

INSTRUCTIONS TO CANDIDATES

1. Read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consists of TWO (2) sections, Section A and B.
4. Answer ALL questions in Section A and Section B.
5. Write your answers in the answer booklet provided.
6. Answer all questions in English.

THERE ARE THREE (3) PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

With appropriate examples, explain the **FOUR (4)** types of threats namely interruption, interception, modification and fabrication.

[10 marks]

Question 2

Explain the purpose of implementing the following to an organization in the context of Information Security Management.

- a) Security survey
- b) Operational audit
- c) Penetration testing
- d) Risk Analysis/ Assessment

[10 marks]

Question 3

- a) Define the term Physical Security Inspection (PSI) and provide **THREE (3)** elements of PSI.

(4 marks)

- b) Crime Prevention Through Environmental Design (CPTED) is defined as a multi-disciplinary approach to deterring criminal behavior through environmental design. Explain **FOUR (4)** CPTED strategies.

(6 marks)

[Total: 10 marks]**Question 4**

- a) Define the term Business Continuity Plan (BCP).

(2 marks)

- b) Explain **TWO (2)** benefits of having an effective BCP to an organization.

(4 marks)

- c) Explain **TWO (2)** key factors required to ensure the success of BCP implementation.

(4 marks)

[Total: 10 marks]

SECTION B (Total: 60 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

Operations Security (OSPEC) is required to ensure the network, computer system, applications and environment up and running in a secure and protected manner.

a) Explain the **FIVE (5)** key process of Operations Security (OSPEC) in an organization.

(10 marks)

b) Explain how backup operation and antivirus control can help in ensuring a secure and protected computer system.

(10 marks)

[Total: 20 marks]

Question 2

Physical security of an information system would protect the system from physical infrastructure damage and also prevent the misuse of the physical infrastructure.

a) Provide **TWO (2)** examples of physical infrastructure damage and **TWO (2)** examples of misuse of physical infrastructure.

(8 marks)

b) Explain **FOUR (4)** physical security preventions and mitigations actions when dealing with environmental and technical threats.

(12 marks)

[Total: 20 marks]

Question 3

Biometrics is the analysis of biological observations which can be used for recognition purposes. Biometric systems are widely used nowadays for authentication as well as identification.

- a) With appropriate examples, explain how biometrics are used for authentication and when it is best for identification.

(12 marks)

- b) Discuss **TWO (2)** security matters need to be considered when choosing biometric system as part of an information security architecture.

(8 marks)

[Total: 20 marks]

END OF QUESTION PAPER