



**FINAL EXAMINATION
MAY 2019 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 : 24 AUGUST 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**

- a) *“Perimeter security is considered as part of the contingency plan.”*

Do you agree with the above statement? Provide your justifications from the view of security planning.

(5 marks)

- b) With appropriate examples, describe how Crime Prevention Through Environment Design (CPTED) can be applied to complement the need of physical security.

(5 marks)

[Total: 10 marks]

Question 2

- a) Explain **TWO (2)** purpose of Physical Security Inspection (PSI) in an organization.

(5 marks)

- b) Describe the importance of Business Continuity Plan (BCP) for an organization.

(5 marks)

[Total: 10 marks]

Question 3

With appropriate examples, explain the **FOUR (4)** kinds of threats namely **Interruption, Interception, Modification and Fabrication**.

[10 marks]

Question 4

- a) Differentiate between **vulnerability scanning** and **penetrate testing**.

(4 marks)

- b) Identify the situations where penetrate testing and vulnerability scanning would be the most needed.

(6 marks)

[Total: 10 marks]

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

You are consulted by one of the airport authorities in your country for a special project which is to deliver a better airport security protection. Based on your discussion with the director of the airport authority, the proposed design should be a cost-effective and a reliable physical security to protect the external area and internal building.

Draft your proposal based on the following situations and questions.

- a) Describe a perimeter security measure you would suggest to cater different weather conditions, huge size and heavy traffic which the system must operate at 24/7 in the wide area of airport compound.
(5 marks)
- b) Propose a suitable fence system that is capable to protect and detect unauthorized access to the outer layer of the airport area and facilities such as cutting detection, anti-climbing and intruders tracking.
(5 marks)
- c) Suggest a practical biometric authentication as a mean of physical access control and surveillance in the airport that could be widely accepted by the public. Provide **THREE (3)** benefits of using the proposed solution to support your recommendation.
(10 marks)

[Total: 20 marks]**Question 2**

Explain the purpose and benefits of implementing the followings in the context of Information Security Management in an organization.

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

[20 marks]

Question 3

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) Describe how backup operation and antivirus control could help an organization ensuring a secure and protected computer system.

(10 marks)

[Total: 20 marks]

END OF QUESTION PAPER