COMSATS University Islamabad, Attock Campus
Department of Computer Science

Program: BSE
Spring 22 Terminal Examination
Course: - Information Security

Marks: 50

Time Allowed: 3 Hours
Dated: ____ 2022
Name: _____   Regn. No: _____

Note:- Don't write anything on Question Paper except your name & Regn. No.

!!!!!!Attempt all Questions!!!!!!

Q. No 1 (CLO-1, PLO-1)
a) Discuss the Critical Characteristics of Information?

b) What is the purpose of balancing security and access? Discuss with example

Q. No 2 (CLO-2, PLO-2)
a. What are Cyber-attacks? Name the Most common ones with brief explanation how these attacks are launched?
b. How these attacks could be prevented you discussed in above question. Suggest solutions.

Q. No 3 (CLO-3, PLO-7)
a. Discuss Network security architecture along all component in detail with the help of diagram
b. Discuss the purpose of firewall along with its different processing modes.

Q. No 4 (CLO-3, PLO-7)
a. Write pseudo code for RSA algorithm

b. Using the RSA public-key encryption algorithm encrypt plaintext $M=4$. Use prime numbers 3 and 5 to generate the public and private keys. You have to show all steps of the given algorithm (CLO-4, PLO-1)

Q. No 5: (CLO-4, PLO-1)
Explain in detail the maintenance model of information security based on five modules/area with Diagram. (You need to describe each module in detail with diagram)

Program: BCS

SP24 Mid Term
Course: - Information Security

Time Allowed: 1.5 Hour
Dated: 23/04/2024   Marks: 50
Name: _____ Regn. No: _____

> **Note:- Don't write anything on Question Paper except your name & Regn. No.**

!!!!!!Attempt all Questions!!!!!!

Q. No 1. (CLO-1, PLO-2)

a) Elaborate different cyber security laws for the security of information and define the procedure for launching complaints in case of security breach.

Q. No 2. (CLO-1, PLO-4)

a) Discuss the DES, explain the working procedure of different rounds to complete the process. You have to show all steps of the given algorithm.

Q. No 3. (CLO-2, PLO-7)

a) Differentiate between active and passive attacks. Explain working with some suitable examples considering confidentiality, integrity and authentication.

Q. No 4. (CLO-2, PLO-2)   Posesive   Psess   inv

a) Investigate computer Forensic techniques and devise a mechanism for securing evidence during digital forensic.

Q. No 5. (CLO-3, PLO-7)   (5+5)

a) Analyze the working of Honey Pots. Discuss how Honey pots help to ensure the security of the system.
b) What is risk assessment, discuss different risk control strategies for possible mitigation.

COMSATS University Islamabad, Attock Campus
Department of Computer Science

Program: BSE

FA 22 Terminal Examination
Course: - Information Security

Time Allowed: 3 Hours

Dated: 18/01/2023   Marks: 90

Name: _____   Regn. No: _____

Note:- Don't write anything on Question Paper except your name & Regn. No.

!!!!!!Attempt all Questions!!!!!!

Q. No 1   (CLO-1, PLO-1)
a) What is role of anti-virus for providing security of any system? Why we need to update the antivirus regularly.
b) Write down the steps for performing digital forensic.

Q. No 2   (CLO-2, PLO-7)
a) Differentiate the IDS and IPS system. Justify your answer with suitable examples.
b) Discuss the purpose of firewall along with its different processing modes.

Q. No 3   (CLO-3, PLO-7)
a) Discuss Network security architecture along all component in detail with the help of diagram.
b) How different devices in network will help to improve security discuss use of router and switches.

Q. No 4   (CLO-3, PLO-7)
a) Discuss about the authorization and authentication in any information system.
b) Explain about different types of authorization and authentication with suitable examples.
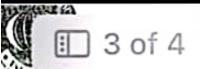
Q. No 5   (CLO-4, PLO-1)
a) How backup helps to ensure system recovery. Discuss different types of backup with possible justification.
b) Discuss the main components of physical vulnerability assessment.

Q. No 6   (CLO-2, PLO-2)
a) What are Cyber-attacks? How these attacks are launched briefly explain?
b) Explain some solutions to prevent these attacks.

ISATS University Islamabad, Attock Campus
Department of Computer Science

Program: **BSCS**

Fall 23 Terminal Examination
Course: - Information Security

Time Allowed: 3 Hours

Dated: 08/01/2024   Marks: 50

Name: _____AfBo_____   Regn. No: ___SP20 -BCS-027___

Note:- Don't write anything on Question Paper except your name & Regn. No.

!!!!!Attempt all Questions!!!!!

Q. No 1 (CLO-1, PLO-1)
(a) How digital forensic helps to identify the illegal activities, explain the general investigation techniques with example.

Q. No 2 (CLO-3, PLO-7)
(a) Discuss information security basic components in detail with the help of diagram.
(b) Discuss the purpose of firewall along with its different processing modes.

Q. No 3 (CLO-3, PLO-7)
(a) Write pseudo code for RSA algorithm
(b) Using the RSA public-key encryption algorithm encrypt plaintext M=4. Use prime numbers 3 and 5 to generate the public and private keys. You have to show all steps of the standard algorithm.   (3)

                                                                            (3)

Q. No 4 (CLO-2, PLO-2)
(a) What are Cyber-attacks? Name the Most common ones with brief explanation how these attacks are launched?
(b) How these attacks could be prevented, you have discussed in above question. Suggest solutions.

Q. No 5: (CLO-4, PLO-1)
(a) Explain your selected topic of presentation clearly identifying the requirement and importance of that area, your answer should include your learning in detail.

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!!!!!!Attempt all Questions!!!!!!

Q. No 1 (CLO-3, PLO-7)

[10]

a) How Honey Pot creates a parallel system for detecting Attacks. Discuss its advantage and disadvantages.

Q. No 2 (CLO-3, PLO-7)

[10]

a) Define IDS and IPS system, justify your response with suitable example.

b) What are the limitations of firewall?

Q. No 3 (CLO-1, PLO-1)

[10]

a) Differentiate between worms and virus, discuss the impact on the performance of system if compromised by worms and virus with examples.

No 4. (CLO-1, PLO-i)

[10]

a) What is risk assessment, discuss different risk control strategies for possible mitigation.

No 5 (CLO-3, PLO-7)

[10]

) Discuss the role of cyber security laws for protecting information. Justify your answer with reference to nation and international rules and regulation

COMSATS University Islamabad, Attock Campus
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Program: BSE

Fall 22 Mid Term
Course: - Information Security

Time Allowed: 1.5 Hour
Dated: 16/05/2022
Name: _____ Regn. No: _____

Marks: 50

Note:- Don't write anything on Question Paper except your name & Regn. No.

!!!!!!Attempt all Questions!!!!!!

Q. No 1 (CLO-1, PLO-1)

a) How the performance of system can be compromised by worms and virus explain with examples.

b) What is risk assessment, discuss different risk control strategies for possible mitigation.

Q. No 2. (CLO-2, PLO-2)

a) What is computer Forensic discuss the purpose of digital forensic with necessary steps.

b) Explain the requirement of Hash Function how this function helps to ensure security.

Q. No 3 (CLO-3, PLO-7)

a) Define IDS and IPS system, justify your response with suitable example.

b) What is the purpose of Honey Pots. Discuss its advantages and disadvantages

Q. No 4 (CLO-3, PLO-7)

a. What are the limitations of firewalls?

b. What is cipher text? Discuss role of keys for ensuring security of data.

Q. No 5 (CLO-4, PLO-1)

Discuss the DES, explain the working procedure of different rounds to complete the process. You have to show all steps of the given algorithm.

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