

CS4404/ INTRODUCTION TO CYBER SECURITY - UNIT 1

DURATION: 180 MINS

TOTAL MARKS: 50

PART A: MULTIPLE CHOICE / SHORT ANSWER

Answer all questions. Each question carries 1 mark.

10 MARKS

- | | | |
|----|--|----|
| 1. | Define Cyber Security. | 1M |
| 2. | What is the primary goal of Confidentiality in the CIA triad? | 1M |
| 3. | What does the term 'Integrity' refer to in information security? | 1M |
| 4. | Name one standard measure to guarantee | 1M |
| 5. | What is Phishing? | 1M |
| 6. | Define a 'Logic Bomb'. | 1M |
| 7. | What is the main function of a Worm malware? | 1M |

- | | | |
|------------|---|-----------|
| 8. | What is a 'Bot' in the context of system-based | 1M |
|
 | | |
| 9. | What does the acronym HIPAA stand for? | 1M |
|
 | | |
| 10. | Define 'Cyber Espionage'. | 1M |

PART B: SHORT ANSWER

Answer all questions. Each question carries 2 marks.

10 MARKS

-
- | | | |
|-----------|--|-----------|
| 1. | Differentiate between Active and Passive attacks. | 2M |
|
 | | |
| 2. | Explain the purpose of the ISO 27001 standard. | 2M |
|
 | | |
| 3. | What is a 'Man in the Middle' (MITM) attack? | 2M |
|
 | | |
| 4. | List four common measures to establish | 2M |
|
 | | |
| 5. | Briefly explain the concept of 'Cyber Warfare'. | 2M |

PART C: DESCRIPTIVE

Answer all questions. Each question carries 3 marks.

15 MARKS

- | | | |
|-----------|---|-----------|
| 1. | Explain the three components of the CIA Triad and how they relate to information security. | 3M |
| 2. | Describe the function of a Trojan Horse and how it differs from a Virus. | 3M |
| 3. | What are the 7 layers of cybersecurity? List them | 3M |
| 4. | Explain the NIST Cybersecurity Framework and its main functions. | 3M |
| 5. | Discuss the difference between Cyber Crime and Cyber Terrorism. | 3M |

PART D: LONG ANSWER

Answer the following questions choosing either option (a) or (b). Each question carries 5 marks.

15 MARKS

- | | | |
|-----------|---|-----------|
| 1. | Elaborate on the various types of Web-based attacks described in the text, including Injection attacks, DNS Spoofing, and Session Hijacking. | 5M |
| 2. | Explain the concept of Security Architecture and describe its different types (Network, Application, Cloud, etc.) with examples. | 5M |

3.

Discuss the Emerging Trends in Cybersecurity such as AI in Security, Zero Trust Architecture, and Cloud

5M