

# CS4404/ INTRODUCTION TO CYBER SECURITY - UNIT 1

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DURATION: 180 MINS

TOTAL MARKS: 50

## PART A: MULTIPLE CHOICE / SHORT ANSWER

Answer all questions. Each question carries 1 mark.

**10 MARKS**

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- 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**

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**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**

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- 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**

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- 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**