

National Forensic Sciences University
School of Cyber Security and Digital Forensics

Course Name:M.Tech. AI & DS (Batch: 2024-26)

Semester -I

Subject Code: CTMTAIDS SIP2

Time: 11:00PM to 12:30 PM

Subject Name:(NetworkSecurity andForensics)**Total Marks:** 50**Exam:** Mid

Semester Examination (March - 2024)

Date: 08-10-2024

Q1. Answer the following questions in short. (Attempt any 4) **[20 Marks]**

- 1)Discuss the ways of discovering the services which are open or closed
- 2) What is the advantage of checking Operation System and its types of a victim machine. How do you check it
- 3)What is asymmetric key encryption.
- 4) Explain the functionality of firewalls
- 5)Define the concept of Digital Signature
- 6)Differentiate betweenIndependent hashing, Repeated hashing, Combined hashing, Sequential hashing, Hierarchical hashing

Q2. Answer the following questions in detail. (Attempt any 3) **[30 Marks]**

- 1)Apply the monoalphabetic symmetric key encryption on the data = powerofeducation with Key=5 and discuss the statistical attack on the encrypted text.
- 2) Explain Penetration Testing Life Cycle.
- 3)Explain OSI Security architecture in detail.
- 4) Explain Combination Transposition Cipher in detail with example.