NATIONAL FORENSIC SCIENCES UNIVERSITY
TA1 Exam
M.Sc. Cyber Security - Semester - I

Subject Code: CTMTCS SI P11

Date: 10/09/2025

Subject Name: ECS CW

Time: 03:30 PM to 04:15 PM

Total Marks: 25

Instructions:

1. Write down each question on a separate page.

			Marks
Q.1		Attempt any five.	
	(a)	Windows Security Policies and Group Policies	05
	(b)	Explain User Account Control (UAC) and Privilege Management	05
	(c)	Explain different types of cyber attack	05
	(d)	Explain CAM Overflow attack.	05
	(e)	Explain access control and duty separation concept in detail.	05
	(f)	Explain process hacker use and advantages for security.	05

Aastha Thakker

National Forensic Sciences University
School of Cyber Security and Digital Forensics
Course Name: M.Sc. Cyber Security (Batch: 2025-27)
Semester -I   Exam: TA - I (SEP – 2025)

Subject Code: CTMSCS SI P4   **Time:** 11:30-12:45
Subject Name: Artificial Intelligence   **Date:** 09/09/2025

Q1. Multiple Choice Question. (Attempt All)   **[05 Marks]**

1 Machine Learning is best described as:

(a) Writing explicit rules (b) Learning from data (c) Manual programming (d) Debugging code

2 Which Python data type stores key–value pairs?

(a) List (b) Tuple (c) Dictionary (d) Set

3 The mode of the dataset {1, 2, 2, 3, 5, 5, 5, 7, 9} is:

(a) 2 (b) 5 (c) 7 (d) 9

4 The dot product of vectors [1, 2, 3] and [4, 5, 6] is:

(a) 22 (b) 28 (c) 32 (d) 36

5 The term Machine Learning itself was introduced later by _____ in 1959.

(a) Alan Turing (b) John McCarthy (c) Arthur Samuel (d) Geoffrey Hinton

Q2. Answer the following questions in short. (Attempt any 4)   **[8 Marks]**

1. Define Artificial Intelligence and explain how Machine Learning is a subset of AI.

2. Write a Python program to find the factorial of a number using a loop.

3. Differentiate between for loop and while loop in Python with examples.

4. Compute the mean and variance of the dataset: {2, 4, 6, 8, 10}.

5. Differentiate between Supervised and Unsupervised Learning.

Q3. Answer the following questions in Detail. (Attempt any 2)   **[12 Marks]**

1. Briefly explain the history of Artificial Intelligence.

2. Explain the issues and challenges in Machine Learning with suitable examples.

3. For the matrices:

$$X = \begin{bmatrix} 2 & 0 & 1 \\ 1 & 3 & 2 \end{bmatrix}, \quad Y = \begin{bmatrix} 1 & 2 \\ 0 & 1 \\ 4 & 0 \end{bmatrix}$$

(i) Find X×Y (ii) Verify the dimensions of the result.

National Forensic Sciences University
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Course Name: M.Sc. Cyber Security (Batch: 2025-27)
Semester - I

Subject Code: CTMSCS SI P2　　　　　　　　　　**Time:** 02:30 pm to 03:15 pm

Subject Name: Cyber Security Audit and Compliance

Exam: TA - I (SEP - 2025)　　　　　　　　　　**Date:** 09-09-2025

Q1 Answer the following questions in word(s). (Attempt All) 　　　**[05 Marks]**

1. ___Banking/Credit___ type of company(s) has to follow the guidelines given by RBI.

2. Audit/Assessment is ___independent___ type of approach. _systematic_

3. Compliance includes ___adherence___ .

4. Arrange the following in proper sequence:

   a. Identifying and categorizing the information and the information systems.
   b. Assessing the controls for effectiveness
   c. Monitoring the security controls.
   d. Authorizing the systems by accepting the risk based upon the selected security controls.
   e. Implementing by selecting appropriate security controls.

5. Enron collapsed in 2001 and filed bankruptcy shareholders saw a loss of $11 billion the auditing and consulting firm namely ___Arthur Anderson___ assisted Enron in deal structuring and other consultative practices.

Q2 Answer the following questions in short/brief. (Any four) 　　　**[20 Marks]**

1) Mr. Markand is running his equity related business. One day he faced a cyber incident in which he lost his data and backups. After this incident Mr. Markand has decided to undergo the training of the cyber security wherein, he was learning the security compliance related topics and have doubt about the difference between Audit and Assessment.

You are his trainer, please provide explanation for the doubt of Mr. Markand.

2) Explain the methods of assessment with suitable example.

3) That day Mr. Chintan was sleeping at his home and suddenly his mobile started getting email notifications and subsequently calls from their clients, he picked-up one of the calls and got the information that his clients are getting messages that their investments to Jecunity & Co. Ltd. (Chris' company) is no longer exist and it will be property of the company. Immediately the CERT team has responded to the incident and removed the infection.

The CERT report says that there were some employees who have attached malicious pen-drives and the malware had compromised the servers and stole the database of

clients. CERT has advised Jecunity & Co. Ltd. to undergo through A risk-based approach to managing information security in the organization.

Please explain the process to meet the compliance as suggested by CERT team.

4) State the importance and requirement of cyber security compliance for any organization briefly.

5) Discuss any real-world case study related to cyber security with some aspect of compliance.

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Aastha Thakker.

National Forensic Sciences University
School of Cyber Security and Digital Forensics
Course Name: MSc Cyber Security   (Batch: 2025-27)
Semester - 1st   Exam: TA - I (Sep – 2025)

Subject Code: Time: 11:30 AM-12:15 PM

Subject Name: IFS&CL   Date: 11-09-2025

Q1. Multiple Choice Question. (Attempt All)   **[05 Marks]**

1 Principle of exchange is given by

a) leone lattes   b) Edmond Locard ✓

c) Fransis Galton   d) Calvin Goddard

2 In paternity disputes which principle/s of Forensic Science are useful

a) Law of Probability   b) Law of comparison

c) Both a and b ✓   d) None

3 Physical evidences are preserved because;

a) Everything changes with passage of time ✓   b) Everything is unique

c) Everything in this world can be compared   d) None of above

4 Which of the following is considered physical evidence?

a) Eyewitness testimony   b) Blood samples ✓

c) Confessions   d) Suspect interviews

5 What is forensic anthropology primarily concerned with?

a) Analysing drug evidence   b) Identifying human skeletal remains ✓

c) Studying insect activity on corpses   d) Examining blood spatter

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Q2. Answer the following questions in short. (Attempt any 4)   **[8 Marks]**

1 How does NFSU support the criminal justice system in India?

2 What is meant by physical evidence in forensic science? Illustrate with examples.

3 Define Locard's Principle and explain its significance in forensic science.

4 When and where was the first State Forensic Science Laboratory established in India?

5 What is the Law of Comparison in forensic science?

Q3. Answer the following questions in Detail. (Attempt any 2)   [12 Marks]

1. Explain important laws or principles of forensic science with suitable examples.

2. Elaborate on the scope of forensic science in India, highlighting at least six key fields and their practical applications in criminal investigations.

3. Trace the development of forensic science from its origins in ancient civilizations to its modern form, including key milestones in India.

--------------------------------ALL THE BEST--