

Seat No.: 304

Enrolment No. 104CTMCS 21

22017

easy to clone  
easy to make changes  
possible to track the concept of the machine  
in course

NATIONAL FORENSIC SCIENCES UNIVERSITY  
MSc. Cyber Security (Essentials of Cyber security & Cyber Warfare)  
Semester - I – April-2022

Subject Code: CTMCS SI P1

Date: 11-4-2022

Time: 11.00AM - 2.00PM

Total Marks: 100

Instructions:

1. Write down each question on separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

		Marks
Q.1	(a) Elaborate on 3 classes of operating system. ? <i>Client, Server, etc</i>	05
	✓(b) How Client operating system is different from server operating system	05
	✓(c) What is data backup? Where and how to backup data ? Name and explain about any data backup tool.	07
	OR	
	(c) How to backup and restore data in windows 11 ?	07
Q.2	✓(a) What is a need of device driver rollback ? How does your data is affected in this process ?	05
	✓(b) Write a note on components of windows access control.	05
	✓(c) What is active directory control ? How active directory permissions contribute in network security ?	07
	OR	
	✓(e) Write a note on Bit locker drive encryption.	07
Q.3	(a) How local group policy objects is different from non local group policy objects ?	08
	✓(b) How App locker can help you to protect windows system ?	08
	OR	
	(b) Design a template using group policy objectives (GPO) to protect your LAN having 50 computers across the bank.	08
Q.4	(a) What is windows account lockout policies ? How account lockout policies helps to overcome security threats?	05
	(b) Define browser. How Google chrome is different from Mozilla Firefox?	05
	(c) Write in detail about 3 miscellaneous administrative templates used in windows system.	07

**OR**

07

(c) How to secure windows networking services ?

- Q.5 (a) What is package control ? What is a need of package control in Linux  
Operating system ? 05
- (b) What is kernel ? Explain the working of kernel using suitable  
diagram. 05
- (c) Elaborate on functions of kernel. How open kernel is different from  
other kernels ? 07

**OR**

07

(c) Write a note on types of kernels.

- Q.6 (a) Write in detail about information assurance using suitable data. 08
- (b) How information operation is different from information warfare. 8

**OR**

- (b) Explain cyber arm control in detail. 8

**END OF PAPER**

Seat No.: 13480

Enrollment No.: 104CTMCS 2122017

NATIONAL FORENSIC SCIENCES UNIVERSITY

M.Sc. Cyber Security -Semester 1 Examination – April-2022

Subject Code: CTMCS5 - S1 P2

Date: 12/04/2022

Subject Name: Cyber Security Audit and Compliance

Total Marks: 100

Time: 11:00 AM To 2:00 PM

**Instructions:**

1. Write down each question on separate Page.
2. Attempt all Question.
3. Make Suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

Q-1 Write any five questions: (25)

- a) What are auditing steps within the IT infrastructure? (4)
- b) What is Goal- Based Security Controls? (4)
- c) How Evidence Acquisition works? (4)
- d) Explain Risk Assessment. (4)
- e) How Audit Plan & Audit Process works? (4)
- f) Explain AAA Model in detail. Authentication , Authorization & Accountability (Se6e) (4)

Q-2 Write any Two Questions: (24)

Accountability (Se6e)

- a) Explain Business Continuity Plan (BCP) (12)
- b) Discuss Types of IT Audits. (12)
- c) What is C-I-A Model in workstation domain? (12)

Q-3 Write any Four Questions: (32)

- a) Write detailed note on ISO/IEC 27001. (8)
- b) Explain GDPR and PCIDSS in detail. (8)
- c) Write HIPAA Act in detail. (8)
- d) What are 7 domains of IT Infrastructure (8)
- e) Explain Disaster Recovery (DR) planning. (8)

Q-4 Write any Two Questions: (24)

- a) Write an Audit Process. Compliance within Remote Access and Application Domain. (12)
- b) Write detail note on CAAT. (12)
- c) How to Implement Security Controls in Infrastructure with steps. (12)

OR

- d) What are the Goals of Audit? (12)

Seat No.: 3014

Enrollment No.: 104CTMScs2

NATIONAL FORENSIC SCIENCES UNIVERSITY

M.Sc. Cyber Security-Semester 1 Examination - April-2022

Subject Code: CTMScsSIP3

Date: 13/04/2022

Subject Name: Web Application Security

Total Marks: 100

Time: 11:00 AM To 2:00 PM

Instructions:

1. Write down each question on separate Page.
2. Attempt all Question.
3. Make Suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

Q-1 Write any five questions

- a) How TCP/UDP Protocol works? (4)
- b) What is fingerprinting custom applications? (4)
- c) How to find virtual hosts in web application? — ? (4)
- d) What is Log monitoring? (4)
- e) What is False Positive? (4)

Q-2 Write any two questions:

- a) Describe Web authentication mechanisms, fuzzing in detail (12)
- b) Describe Leaky APIs and Insecure Data Storage (12)  
OR
- c) How REST (API) works? Describe Error Response (Status Code) (12)

Q-3 Write any Four questions

- a) Describe Terminology
  - I. CVE (8)
  - II. CWE (8)
  - III. CVSS (8)
  - IV. STRIDE (8)
  - V. DREAD (8)
  - VI. Secure Source Code Review Details. (8)
- b) What is Docker containers security? (8)
- c) Describe Introduction to CMS. (8)
- d) How File Inclusion works? (8)
- e) SQL Injection - Vulnerable code describe. (8)

Q-4 Write any two questions

- a) Explain Vulnerability Assessment and its Life cycle. (12)

- CS2
- b) Explain OWASP top 10 (2017) with mitigation. (12)
  - c) Describe Web authentication mechanisms, fuzzing in detail. (12)

**End Of Paper**

**NATIONAL FORENSIC SCIENCES UNIVERSITY**  
**M.Sc. (Cyber Security) - Semester - I - April - 2022**

Date: 16/04/2022

**Subject Code: CTM45CS SI P4****Subject Name: Artificial Intelligence****Time: 11:00 AM to 2:00 PM****Total Marks: 100****Instructions:**

1. Write down each question on a separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

25

Q.1

- (a) Write note on the different types of Python Libraries. 05
- (b) Describe python script on "conditional loop" and mention the expected output. 05
- (c) Explain the basic commands of python with examples. 07

**OR**

What is Artificial Intelligence? Describe its growth and sub-domains?

Q.2

- (a) Explain the following terms Vectors, Matrices, Linear Equations. 05
- (b) What is the difference between the 'Training set' and 'Testing set'? 05
- (c) Mention Performance Metrics of the Supervised Learning in detail. 07

Q.3

- (a) Explain the biological brain and write applications of Artificial Neural Network(ANN). 08
- (b) Explain the Recurrent Neural Networks (RNN). 08

**OR**

Describe RNN with its disadvantages. How LSTM can overcome the limitations of RNN? Explain with example?

Q.4

- (a) Write a note on the Pattern Recognition process. 05
- (b) Explain the Role of ML in Cyber Security. 05
- (c) Explain the Unsupervised Learning with its types in detail. 07

Q.5

- (a) What is Malware Detection in cyber security? Explain with example. 05
- (b) Explain the ML based Intrusion Detection system. 05
- (c) Write real time applications of Natural Language Processing. 07

[P.T.O]

08

Q.6 (a) Write a note on different stages pen testing using ML.

OR

Enlist the regression process with example.

08

(b) Explain the details ANN architecture with single and Multi-layer model.

OR

Explain the importance of Social Engineering in cybersecurity.

Marie  
Soham

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Seat No.: 3014

Enrolment No: 1041T MSc S2122

**NATIONAL FORENSIC SCIENCES UNIVERSITY**  
**MSCS Semester - 1 (April, 2022)-Goa Campus April-2022**

Subject Code: CTMSCS SI P5

Date: 18/04/2022

Subject Name: Introduction to Forensic Science and Law

Time: 11:00 AM to 2:00 PM

Total Marks: 100

**Instructions:**

1. Write down each question on separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

		Marks
Q.1	(a) Define Forensic Entomology and its application in Forensic Science.	05
	(b) Give a brief account on cloud storage, how it works and its benefits.	05
	(c) Differentiate between bailable and non-bailable offences.  OR Differentiate between cognizable and non-cognizable offences.	07
Q.2	(a) What is Mobile Forensic Unit and how is it helpful in crime scene investigation?	05
	(b) What is Cyberethics? Briefly explain some of the breaches of the cyberethics.  OR Explain Trademark and Patent?	05
	(c) Explain in detail the steps involved in Crime scene Investigation with examples	07
Q.3	(a) Give a detailed account of the kinds of Punishment mentioned in IPC.	08
	(b) Explain significance of any 4 fields of forensic science in criminal investigation.  OR Explain the hierarchy of courts in India.	08

Q.4

Q.5

Q.6

Q.4	(a)	Why cyber law is necessary in today's world? Give reasons. OR Explain Section 43?	05
	(b)	What is AFIS? Briefly explain its working.	05
	(c)	NCRB functions as a repository on information on crime and criminals. Justify the statement.	07
Q.5	(a)	What are the essential elements of Dowry death as per IPC, 1860?	05
	(b)	Briefly explain any 5 cybercrimes against organization?	05
	(c)	What are INTERPOL notices? Explain any 5 notices in brief.	07
Q.6	(a)	Give a detailed account of types of offences investigated by the central investigative agency of India.	08
	(b)	What is SEM? Explain working principle and its use in forensic science. OR Explain in detail the steps involved in Crime scene Investigation with examples	08