Seat No.: _____ Enrolment No. 240103007003

NATIONAL FORENSIC SCIENCES UNIVERSITY

Semester End Examination (April – 2025)

M.Tech AI&DS

Semester – II

Subject Code: CTMTAIDS SII P2 **Date:** 25/04/2025

Subject Name: Mobile Security and Forensics

Time: 10:30 AM to 01:30 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.**

			Marks
Q.1		**Answer the following question (Attempt any three)**	
	(a)	Describe Android Architecture in detail with an appropriate diagram.	**08**
	(b)	Describe Android Application Components in detail.	**08**
	(c)	What is Sandboxing? Describe Inter-process Communication in the Android OS.	**08**
	(d)	Explain the Android Boot process in detail.	**08**
Q.2		**Answer the following question (Attempt any three)**	
	(a)	What is ADB? Explain any five ADB commands.	**08**
	(b)	Discuss access control issues and how you would pen-test it.	**08**
	(c)	What is Content Provide Leakage, and how do you pent-test it?	**08**
	(d)	Discuss the client-side injection with an example.	**08**
Q.3		**Answer the following question (Attempt any three.)**	
	(a)	Discuss the Mobile application security pen-testing strategy.	**08**
	(b)	Discuss any four Drozer modules with examples.	**08**
	(c)	Discuss the Static Analysis using MobSF.	**08**
	(d)	Discuss the insecure data storage issue with an example.	**08**
Q.4		**Answer the following question (Attempt any two)**	
	(a)	Discuss how Frida and the Objection Framework will be used to pen-test mobile application security.	**07**
	(b)	Discuss reverse engineering techniques to reverse engineer an Android application.	**07**
	(c)	Discuss the Dynamic Analysis using MobSF.	**07**
Q.5		**Answer the following question (Attempt any two)**	
	(a)	What is the importance of Network Traffic Analysis of an Android Device? How does it help us in penetration testing? Explain.	**07**
	(b)	Describe the difference between Active and Passive network traffic analysis of an Android Device in detail.	**07**
	(c)	Describe the Android Traffic Interception. How can you intercept the HTTP/HTTPS traffic using a Proxy Server? Explain in detail.	**07**

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