

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - December- 2025
MOBILE APPLICATION SECURITY
(CSC)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(10 Marks)

1. a)	Define secure data storage in mobile applications.	[1M]
b)	What is multi-factor authentication?	[1M]
c)	Explain about WAP in mobile communication.	[1M]
d)	Discuss about SQL injection.	[1M]
e)	Define Bluetooth stack.	[1M]
f)	Differentiate between Bluetooth version v1.2 and v2.1 in terms of security.	[1M]
g)	Define MMS (Multimedia Messaging Service).	[1M]
h)	What is meant by abusing legitimate functionality in mobile networks? Explain.	[1M]
i)	What is e-mail encryption and why is it important?	[1M]
j)	Demonstrate about secure local storage.	[1M]

PART-B

(50 Marks)

2.a)	Describe various types of mobile threats such as viruses, worms, trojans, spyware, and malware.	[5M]
b)	Explain the process and importance of SSL enforcement and how phishing attacks can be prevented in mobile environments.	[5M]

OR

3.a)	Analyze the challenges in maintaining location privacy and securing user data in mobile devices.	[5M]
b)	Summarize the common development challenges and modern tips to ensure secure mobile application development.	[5M]
4.a)	Demonstrate different application attacks on mobile HTML sites.	[5M]
b)	Discuss the importance and configuration of “HTTP Only” and “SECURE” flags for enhancing browser security.	[5M]

OR

5.a)	Analyze the major weaknesses of WAP and mobile browsers in terms of security vulnerabilities.	[5M]
b)	What are the common limitations of WAP and how do they affect mobile communication security?	[5M]
6.a)	What are the traditional security services in Bluetooth? Discuss their functions.	[5M]
b)	Describe recent security schemes developed for Wi-Fi applications.	[5M]

OR

7.	Discuss the different modes of operation and network topologies used in Bluetooth communication.	[10M]
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8.a) Describe how XML is converted to WBXML and discuss its significance in mobile data transmission. [5M]
b) Write a detailed note on the Motorola RAZR JPG overflow vulnerability and its security implications. [5M]

OR

9.a) Give an overview on Short Message Service. [5M]
b) What are protocol attacks? Explain. [5M]

10. Explain application signing, permissions and buffer overflow protection in detail. [10M]

OR

11.a) Discuss the security features of Apple iPhone with respect to Keychain and data protection. [5M]
b) What is application sandboxing? Explain how it enhances mobile security. [5M]
