

Code No.: R22CY731PE

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H.T.No.

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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]

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]

- 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]
