

Code No: 156FJ

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, March - 2024****MOBILE APPLICATION SECURITY****(Computer Science and Engineering – Cyber Security)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.  
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.  
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A****(25 Marks)**

- 1.a) What types of malicious software pose threats to mobile devices? [2]
- b) Differentiate between spyware and malware with examples. [3]
- c) What is SQL injection? [2]
- d) Write the differences between WAP 1.0 and WAP 2.0. [3]
- e) Write a short note on location privacy. [2]
- f) What is the difference between Bluetooth and Wi-Fi? [3]
- g) Write a short note on protocol data unit. [2]
- h) Define WAP gateway. [3]
- i) What is an application of sandboxing? [2]
- j) How the iPhone and Android phones mitigate the buffer overflow attacks? [3]

**PART – B****(50 Marks)**

- 2.a) Discuss the current issues of mobile devices and its applications.
  - b) Explain the mechanism behind a CSRF attack. [5+5]
- OR**
- 3.a) Describe briefly about OWASP mobile threat model.
  - b) What are the guidelines for developing secure mobile applications? [5+5]
- 4.a) Explain the WAP architecture with a neat diagram.
  - b) How non-SSL login mechanisms work and why they are considered insecure? [5+5]
- OR**
- 5.a) What are the limitations of WAP and mobile browser?
  - b) Discuss the evolution of encryption algorithms from WAP 1.0 to WAP 2.0 and their impact on mobile security. [5+5]
- 6.a) Explain the features of Bluetooth security in detail.
  - b) Describe the architecture of a typical Bluetooth system. [5+5]
- OR**
- 7.a) Discuss the Bluetooth vulnerabilities in various versions.
  - b) Discuss about different types of operation modes. [5+5]

8.a) Explain about protocol attacks that involve the abuse of legitimate functionality with real-world examples.

b) Discuss the security vulnerabilities associated with MMS protocols. [5+5]

**OR**

9.a) Discuss how MMS works on Windows Mobile devices.

b) Explain the process of encoding and decoding XML documents into WBXML format. [5+5]

10.a) How does file encryption differ from full disk encryption and email encryption?

b) What is application isolation? And explain the differences between modern and traditional application isolation models with example. [5+5]

**OR**

11.a) Explain about buffer overflow. And how it will be mitigated in iPhone and Android OS.

b) What are the steps followed to enable a PIN on a SIM on Apple iPhone and windows mobile phone? [5+5]

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Use Paper March-2024