

Code No: 156FJ**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, August/September - 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) Why is a secure operating system important for mobile devices? [2]
- b) What is the importance of application isolation in mobile devices? [3]
- c) Define session fixation. [2]
- d) Differentiate between HTTP and HTTPS. [3]
- e) Illustrate the future of Bluetooth technology. [2]
- f) What are Bluetooth profiles? [3]
- g) What is an example of abusing legitimate functionality? [2]
- h) What is a common target for application attacks on mobile devices? [3]
- i) What is the purpose of a PIN in mobile OS security? [2]
- j) How does security feature summary help users? [3]

PART – B**(50 Marks)**

- 2.a) Illustrate the methods used for secure data storage on mobile devices and their effectiveness.
- b) Summarize the difficulties faced in implementing strong authentication on mobile devices with poor keyboards. [5+5]

OR

- 3.a) Differentiate between virus, worms, trojans, spyware, and malware in the context of mobile security.
- b) Examine the risks associated with Cross-Site Request Forgery (CSRF) on mobile devices and mitigation strategies. [5+5]

- 4.a) Briefly explain how to implement a secure login mechanism on a WAP site.
- b) Classify different types of application attacks on mobile HTML sites. [5+5]

OR

- 5.a) Examine the weaknesses of WAP browsers and propose solutions to mitigate them.
- b) Determine the consequences of not supporting the HTTP Only flag in WAP browsers. [5+5]

6. Explain the following terms:
a) Bluetooth security features
b) Bluetooth vulnerabilities. [5+5]

OR

- 7.a) Summarize the history and evolution of Bluetooth standards up to the current version.
b) Examine the different modes of operation in Bluetooth and their respective uses. [5+5]

- 8.a) Illustrate how Wireless Application Protocol (WAP) functions and discuss its security implications.
b) Contrast application attacks on iPhone Safari with those on Windows Mobile MMS. [5+5]

OR

- 9.a) Explain the process of converting XML to WBXML.
b) Support or refute the statement: "Attacking protocol implementations is more harmful than abusing legitimate functionality." [5+5]

- 10.a) Explain the specific security features of Android that make it a secure platform.
b) Summarize the role of secure local storage in enhancing mobile device security. [5+5]

OR

- 11.a) Determine the effectiveness of buffer overflow protection in preventing security breaches.
b) Categorize the security features of BlackBerry. [5+5]

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