



Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
B.Tech Degree S6 (Hons.) Examinations April 2026 (2023 Admn)

**Course Code: CCT394**  
**Course Name: WIRELESS AND EMAIL SECURITY**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 3 marks.*

Marks

- |    |  |     |
|----|--|-----|
| 1  | What is meant by Enterprise Grade Access Points?                 | (3) |
| 2  | What are the types of Wireless Networks?                         | (3) |
| 3  | Explain the concept of IDS and IPS.                              | (3) |
| 4  | What is SSID cloaking and how does it work in wireless networks? | (3) |
| 5  | What are the benefits of using digital certificates?             | (3) |
| 6  | Explain the components of PKI.                                   | (3) |
| 7  | What are the email components in Internet Mail Architecture?     | (3) |
| 8  | How does the SMTP work?  | (3) |
| 9  | What is a TLSA record?   | (3) |
| 10 | What is the Sender Policy Framework (SPF)?                       | (3) |

**PART B**

*Answer one question from each module, each carries 14 marks.*

**Module I**

- |    |  |     |
|----|--|-----|
| 11 | a) Define the following terminologies:                 | (8) |
|    | i. SSID  |     |
|    | ii. BSSID  |     |
|    | iii. MAC address                                       |     |
|    | iv. Beacons and Broadcasts                             |     |
|    | b) How is encryption implemented in wireless networks? | (6) |

**OR**

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|----|---|-----|
| 12 | a) How do the 802.11a, 802.11b, 802.11g, and 802.11n wireless standards differ from each other? | (8) |
|    | b) How do DD-WRT, WRT54G, and mini access points function in wireless networks?                 | (6) |

**Module II**

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|----|--|------|
| 13 | a) How are "New Deployment," and "Existing Wireless Network," defined in the context of wireless network setups? | (10) |
|----|--|------|

- b) What are the typical wireless defenses used to secure networks? (4)

OR

- 14 a) Describe the terms: (10)
- i. Defense in Depth
  - ii. Least Privilege
  - iii. Secure the Infrastructure
  - iv. Rogue AP Detection
  - v. Physical Security.

- b) Differentiate routers and switches. (4)

**Module III**

- 15 a) What is the architecture of WPA Enterprise? (8)

- b) Describe: (6)
- i. Pre-Shared Key (PSK) Authentication
  - ii. 802.1x/EAP Authentication
  - iii. Authentication Server

OR

- 16 a) Explain RADIUS (Remote Authentication Dial-In User Service). (8)

- b) What is the role of Microsoft Certificate Services? (6)

**Module IV**

- 17 a) Using a functional flow diagram, describe the S/MIME operational description. (10)

- b) What are the four principle services provided by S/MIME? (4)

OR

- 18 a) Describe the following Email Formats: i. RFC ii MIME (8)

- b) Explain Pretty Good Privacy (PGP). (6)

**Module V**

- 19 a) What is the functional flow of DKIM? Provide a diagram. (10)

- b) What is DKIM and how can it be deployed? Give an example. (4)

OR

- 20 a) Describe: i. DMARC on the Server Side ii. DMARC on the Receiver Side (10)

- b) What is included in a DMARC report? (4)

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