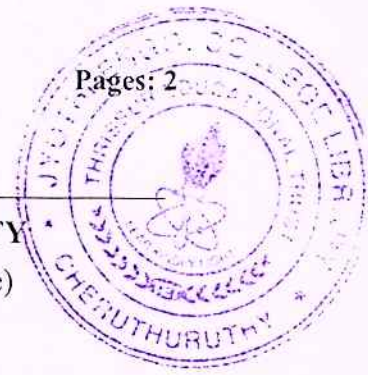


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S5 (S,FE) Examinations June 2026 (2019 Scheme)



Course Code: CCT305

Course Name: SYSTEMS & NETWORK SECURITY

Max. Marks: 100

Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks)

Marks

- | | | |
|----|---|---|
| 1 | What do you understand by the term attack? Mention the different types of attacks | 3 |
| 2 | Explain the concept of subnetting. | 3 |
| 3 | Explain the protection mechanisms against malware in a Windows workstation. | 3 |
| 4 | List any four appropriate times when the security posture of a Windows system should be re-evaluated. | 3 |
| 5 | What is meant by Privacy and Security? | 3 |
| 6 | What are the key security measures that a Web-based application dealing with sensitive data must address? | 3 |
| 7 | Explain the practical aspects of digital signatures? | 3 |
| 8 | What are the common device security issues in wireless networks? | 3 |
| 9 | Discuss the major security issues in GPRS. | 3 |
| 10 | What is the purpose of SSL(Secure Socket Layer) Alert Protocol? | 3 |

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

- | | | |
|----|--|---|
| 11 | a) Explain how the principles of network security contribute to protecting network resources. | 7 |
| | b) Explain the concept of Network Address Translation (NAT) and describe its primary functions. | 7 |
| 12 | a) Explain the steps involved in the Address Resolution Protocol (ARP) when a host needs to communicate with another host on the same network. | 7 |
| | b) Explain the working of DHCP (Dynamic Host Configuration Protocol) with a neat diagram. | 7 |

Module -2

- | | | | |
|----|----|--|---|
| 13 | a) | Explain the different types of system upgrades and patches with suitable examples | 7 |
| | b) | What measures should be followed to create and maintain secure passwords in Windows systems? | 7 |
| 14 | a) | Explain the process of Linux system hardening and its importance in maintaining system security. | 6 |
| | b) | Discuss the best practices for maintaining the physical security of a Linux system. Highlight the importance of backups and operating Linux securely | 8 |

Module -3

- | | | | |
|----|----|---|---|
| 15 | a) | Define the Domain Name System (DNS) and discuss its significance. | 7 |
| | b) | Discuss various techniques of web hacking. | 7 |
| 16 | a) | Explain the working of HTTP with a neat diagram? | 7 |
| | b) | Explain the common methods employed by attackers to target users. | 7 |

Module -4

- | | | | |
|----|----|---|---|
| 17 | a) | Discuss the difference between proprietary and open-source algorithms. | 7 |
| | b) | Describe how steganography is used to hide information, giving an example. | 7 |
| 18 | a) | Describe the different types of digital watermarking. | 8 |
| | b) | Explain how confidentiality, integrity and availability are related to steganography? | 6 |

Module -5

- | | | | |
|----|----|---|---|
| 19 | a) | Explain the working of IP Security. | 7 |
| | b) | Explain Wireless Transport Layer Security (WTLS) and the features provided by WTLS. | 7 |
| 20 | a) | Compare and contrast the different categories of firewalls | 6 |
| | b) | Explain the different phases of penetration testing. | 8 |
