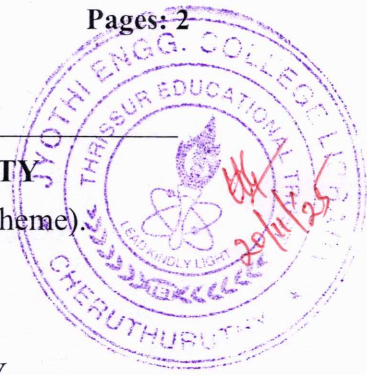


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S5 (R,S) Examination November 2025 (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	Elaborate on the concept of the defense-in-depth methodology and include diagram to describe multifaceted layers of security.	3
2	What are the primary benefits of implementing VLANs?	3
3	What is the critical role of a Demilitarized Zone (DMZ) within network architecture, and how does it contribute to enhancing security?	3
4	What strategies and countermeasures can be employed to mitigate the risks associated with TEMPEST attacks?	3
5	What are the various email protocols, and can you explain three of them along with their differences?	3
6	What are the preventive measures against spam?	3
7	Describe the different tools used for steganography.	3
8	What are the different types of watermarking?	3
9	What you mean by security auditing and monitoring?	3
10	Explain the role of encryption in GPRS security and the algorithms typically used.	3

PART B

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

Module -1

11	a) Explain various security services.	7
	b) Explain ARP and the different types of ARP.	7
12	a) Can you explain the concept of Network Address Translation (NAT) in networking and outline the different types available?	7
	b) Explain the concept of subnetting and its significance in network management.	7

Module -2

13	Why is Linux considered a less attractive target for security attacks?	14
14	Describe the steps to be followed before putting a workstation on any network.	14

Module -3

- | | | | |
|----|----|---|----|
| 15 | a) | Can you describe the process by which a web browser operates to retrieve, interpret, and display web content? | 7 |
| | b) | Explain in detail the different types of attacks that target web browsers. | 7 |
| 16 | | What is E-mail security? Why E-mail security is so important? | 14 |

Module -4

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|----|----|---|----|
| 17 | a) | Explain the principles of cryptography. | 7 |
| | b) | What are the four cryptographic primitives? | 7 |
| 18 | | How is steganography related to core areas of network security? | 14 |

Module -5

- | | | | |
|----|----|---|----|
| 19 | | Describe the WAP architecture. | 14 |
| 20 | a) | Explain different types of intrusion detection systems. | 7 |
| | b) | Illustrate the different types of firewall. | 7 |
