



End Term (Odd) Semester Examination November 2025

Roll no. 22941038

Name of the Course and semester: **BTECH (CSE)**

Name of the Paper: **Security Audit and Compliance II**

Paper Code: **TCS 795**

Time: 3 hour

Maximum Marks: 100

Note:

- (i) All the questions are compulsory.
- (ii) Answer any two sub questions from a, b and c in each main question.
- (iii) Total marks for each question is 20 (twenty).
- (iv) Each sub-question carries 10 marks.

Q1. (2X10=20 Marks) **CO-1**

- a. Compare the OSI and TCP/IP models in terms of their structure, layering, and practical implementation.
- b. What is the Zero Trust security model? Explain its core principles and how it differs from traditional perimeter-based security approaches in protecting network resources?
- c. Explain the following :
 - 1. Public Key Infrastructure (PKI)
 - 2. Secure Socket Layer (SSL)

Q2. (2X10=20 Marks) **CO2**

- a. Differentiate between Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS). Compare network-based and host-based IDS/IPS
- b. What is a Virtual Private Network (VPN)? Explain the differences between site-to-site and remote access VPNs
- c. How do firewalls and VPNs contribute to network security in modern enterprise environments? Provide examples of how these technologies are used together to protect sensitive data and ensure secure remote access?

Q3. (2X10=20 Marks) **CO-3**

- a. Explain the architecture and key components of IEEE 802.11 Wireless LAN.
- b. Compare the security features of WPA, WPA2, and WPA3. What improvements does WPA3 introduce over its predecessors in terms of encryption and authentication?
- c. What is a Wireless Intrusion Prevention System (WIPS)? Describe its main functions and how it helps in detecting and mitigating wireless network threats

Q4 (2X10=20 Marks) **CO-4**

- a. Explain the core components of Identity and Access Management (IAM). How do Identity Management, Access Management, and Privilege Access Management differ in their roles and responsibilities within an organization?
- b. Discuss the factors of authentication and the differences between single-factor and multi-factor authentication (MFA). How does MFA enhance security in both traditional and hybrid modern application architectures?
- c. Describe the stages of the identity lifecycle in IAM, including registration, proofing, establishment



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of identity, and deprovisioning

Q5.

(2X10=20 Marks) **CO-5**

- a. Explain the role of Active Directory in Identity and Access Management (IDAM). How does it facilitate centralized authentication and authorization for network resources?
- b. Discuss the hierarchical structure of Active Directory; including Organizational Units (OUs), Domains, and Forests. How do these components help in organizing and managing network resources?
- c. Compare and contrast Microsoft Active Directory (on-premises) with Azure AD (now Microsoft Entra ID). Highlight the key differences in architecture, deployment, and use cases for each