Define Public Key Infrastructure (PKI) and explain its role in ensuring secure communication on the interne. How does PKI utilize digital certificates for

authentication and encryption?

2)

IINIT-IV Explain the Secure Socket Laver (SSL) protocol and its role in providing secure 3) communication over the intemet. Discuss the key features, components, and handshake process of SSL.

UNIT-III Illustrate the working of MD-5. List out difference between MD5 and MD4.

Discuss the role of 3-D Secure Protocol in enhancing the security of online card 4) payments. What are Public Key Cryptography Standards (PKCS), and how do they standardize cryptographic operations within a PKI environment? Provide examples of 5) commonly used PKCS standards and their applications.

Critically assess the security implications of using crypto currencies like Bitcoin in 6) online transactions, considering factors such as anonymity, decentralization, and regulation Provide an overview of basic concepts in Internet Security Protocols. What are the 7) primary objectives of these protocols, and how do they contribute to securing online

communication?

IINIT-V

Explain the authentication standards Kerberos with suitable diagram. 8)

9) Discuss the role and types of Firewall for organization level with suitable diagram.

10) What is IP Security? Give brief note on IPSec Kev Management.

Write a short Notes on: a) Virtual Private Networks b) Intrusion Detection

11)

12) Describe the process of two-factor authentication (2FA). How does it enhance

security compared to traditional password-based authentication?