#### 1. Introduction

* + What is CIA Triad ? Explain.
  + List any 5 challenges of computer security.
  + What is OSI Security Architecture ? Explain
  + What are Security Attacks ? Explain the various types of Passive attacks.
  + List and explain Security Services as per the OSI Security Architecture.
  + List and explain the Security Mechanisms as per the OSI Security Architecture.
  + Explain a typical model for network security.

#### 2. Key Management & Distribution

* + List 4 different ways to share a key.
  + Explain a simple key distribution scenario under the presence of a KDC.
  + Explain a scenario where Symmetric Key is distributed using symmetric encryption.
  + Explain a scenario where Symmetric Key is distributed using asymmetric encryption.
  + Explain a MITM attack scenario
  + Explain 4 different ways of distribution of public keys.
  + Draw X.509 certificate's architecture.
  + List and explain the elements of a PKIX Architectural Model.
  + List and explain any 5 PKIX Management Functions.

#### 3. User Authentication Protocols

* + List the steps involved in authentication process.
  + Four general means of authenticating a user's identity.
  + List 4 different types of Replay Attacks.
  + Explain the process of Mutual Authentication for authenticating a Remote user using symmetric encryption.
  + What is a Kerberos Realm ?
  + Explain the secure authentication dialogue in Kerberos v4.
  + Summarize the message exchanges of Kerberos v4.
  + Summarize the message exchanges of Kerberos v5.
  + Explain the overview of Kerberos version 4 using appropriate diagram.
  + Explain how a client request for service in another kerberos realm.
  + List 6 environmental shortcomings in the Kerberos v4.
  + List 4 technical deficiencies in the Kerberos v4.
  + Explain the process of Mutual Authentication for authenticating a Remote user using Asymmetric Encryption.
  + What is Identity Management ? List the 9 principal elements of an identity management system.
  + Explain the Generic Identity Management Architecture.
  + What is Identity Federation ? Illustrate the entities and data flows in a generic federated identity management architecture.