## **Module No.4**

## Digital signature schemes and authentication Protocols

## **Topic:**

4.1 Digital signature and authentication protocols : Needham Schroeder Authentication protocol, Digital Signature Schemes – RSA, EI Gamal and Schnorr, DSS.

## **Questions:**

- 1. Explain Needham -Schroeder protocol for secret key distribution with suitable diagram.
- 2. List the steps for key generation, message signing and signature verification in :
  - (i) RSA Digital signature scheme.
  - (ii) El-Gamal Digital signature scheme
  - (iii) Schnorr &
  - (iv) Digital Signature Standard (DSS)
- 3. Compare: Hash,MAC & Digital Signature.
- 4. What is a digital signature? Explain any digital signature algorithm.