Computer Network Security Important Questions

Unit – 01: Attacks on computers and computer security

1. What is computer security?
2. Explain need of information security.
3. Discuss different types of attacks.
4. What is cryptography? Explain types of cryptography.
5. Differentiate between substitution and transposition cipher techniques.

Unit – 02: Mathematics of cryptography

1. Discuss the term DES. Write the applications of DES Algorithm.
2. Explain different DES Modes of Operation.
3. Differentiate between DES and AES algorithms.
4. Discuss about 2DES and 3DES in brief.
5. What is a side-channel attack?

Unit – 03: Symmetric-Key Cryptography

1. What do you mean by Glosis field theory explain with example?
2. Write the difference between AES and DES.
3. Differentiate between block cipher and stream cipher.
4. Explain RC4, RC5 and RC6 in brief.
5. Write short notes on:
   a. Rijndael algorithm
   b. Blowfish
   c. IDEA
   d. RSA

Unit – 04: Asymmetric-Key Cryptography

1. What is asymmetric cryptography? Discuss RSA in brief.
2. Discuss Elliptic curve cryptography in details.
3. What do you mean by Digital certificates and PKI.

Unit – 05: Cryptographic Hash Functions

1. What are Cryptographic Hash Functions?
2. What is digital signature? What are the benefits of digital signatures?
3. Write the difference between RSA algorithm and DSA.

4. Write short notes on:
   a. Message Digest(MD)
   b. MAC
   c. Kerberos.

Unit – 06: Network Security

1. What do you mean by network security? What are the benefits of network security?
2. What are network security protocol? Discuss any two network security protocol.
3. Discuss about email security. Also explain email architecture.
4. Differentiate between PGP and S/MIME.
5. What is IP Security? Define its architecture in brief.
6. Define Virtual Private Network in brief.

Unit – 07: System Security

1. What do you mean by Intruder?
2. What is attack? Describe different types of attacks in network security.
3. Define the term virus. Explain various types of virus in brief.
4. Describe virus and antivirus in details.
5. Write short notes on:
   a. Firewall
   b. Virtual Private Network(VPN)
   c. Honeypot

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