

Assignment No. 1

Q1) Explain the following system security terms in detail with example:

Q) Security Mechanism:

- i) Security mechanism are various techniques recommended to provide security services at various OSI layers.
- ii) The various security mechanism that can be applied are as follows:

1) Encryption (Encryption)

- Symmetric

- Asymmetric

2) Digital signature

- signing a data unit

- verifying a data unit

3) Access control

- password

- Duration of access

- Time of access

- Access route

4) Data integrity

- Sent quality of data

- Sequencing of data unit

- Received quantity of data

- Time stamping

5) Authentication

- Handshaking

- Cryptographic techniques

6) Traffic Padding

7) Routing control

8) Pervasive security

9) Security loads

10) Security audit

11) Security Recovery

12) Event Detection

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	HMAC	CBC-MAC	CMAC
Type:	Hash based MAC	block cipher based MAC	- " -
underlying Algo:	Hash Function	block cipher	- " -
key length	128, 256 bit	AES: 128	Same as CBC-MAC
Efficiency	Fast	Faster HMAC	Slightly Slow
Application	Used TLS, SSL	banking	Sequence communication

$$\frac{14.3}{15}$$

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