SNS COLLEGE OF TECHNOLOGY
Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University,
Chennai

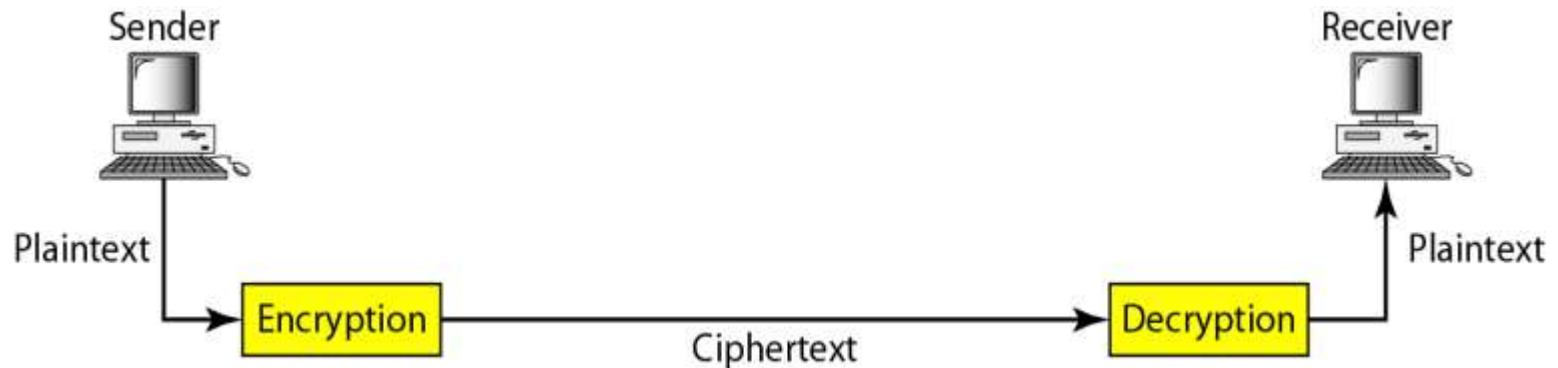### 19ECT301-COMMUNICATION NETWORKS III YEAR/ V SEMESTER

UNIT 4- NETWORK & DATA SECURITY

TOPIC –Cryptography Techniques

-encryption and decryption algorithms as ciphers
**-*cipher is also* used to refer to different categories of algorithms in cryptography**

Key

-A key is a number (or a set of numbers) that the cipher, as an algorithm, operates on.

-To encrypt a message, we need an encryption algorithm, an encryption key, and the plaintext.

-These create the ciphertext.

-To decrypt a message, we need a decryption algorithm, a decryption key, and the ciphertext.
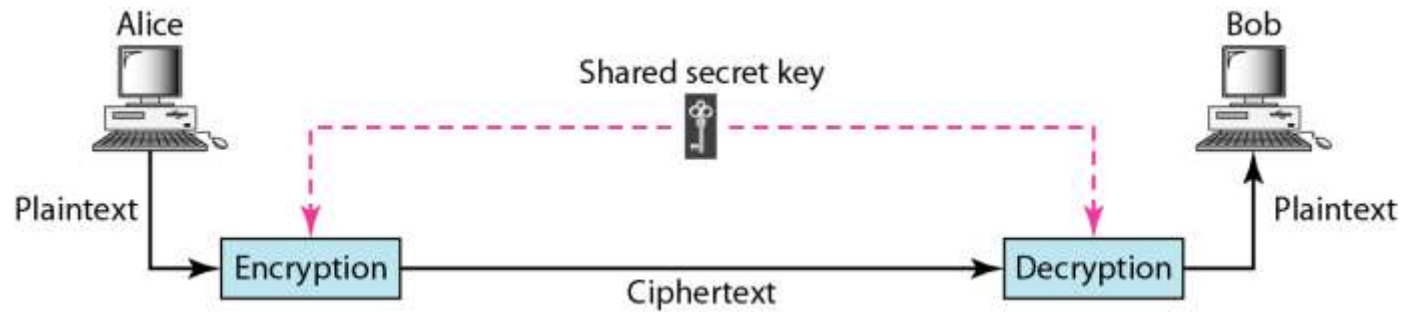
-These reveal the original plaintext.

Categories of cryptography

Symmetric-key cryptography

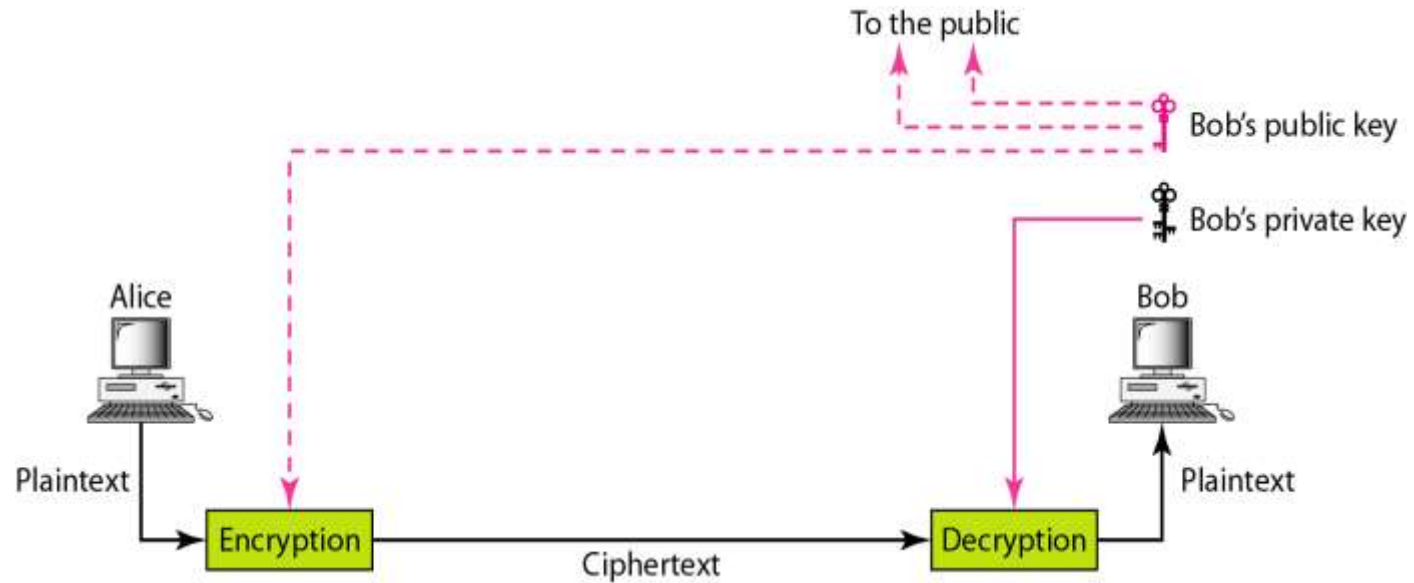Cryptography Techniques /19ECT301 COMMUNICATION NETWORKS /K.SURIYA/ECE/SNSCT
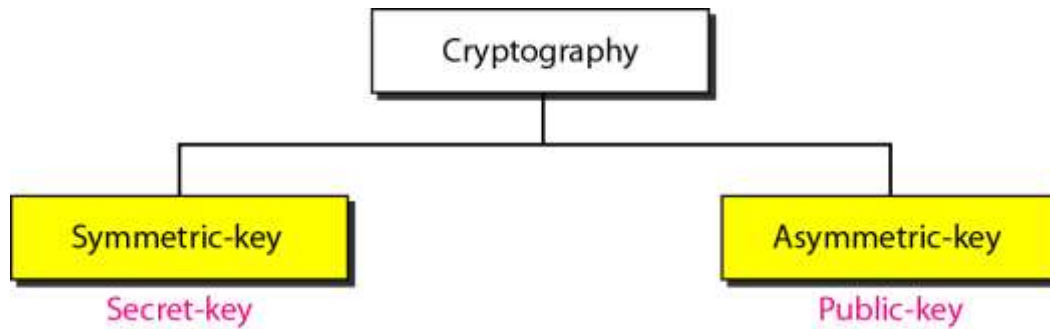
Note

In symmetric-key cryptography, the same key is used by the sender (for encryption) and the receiver (for decryption). The key is shared.

Asymmetric-key cryptography

Keys used in cryptography

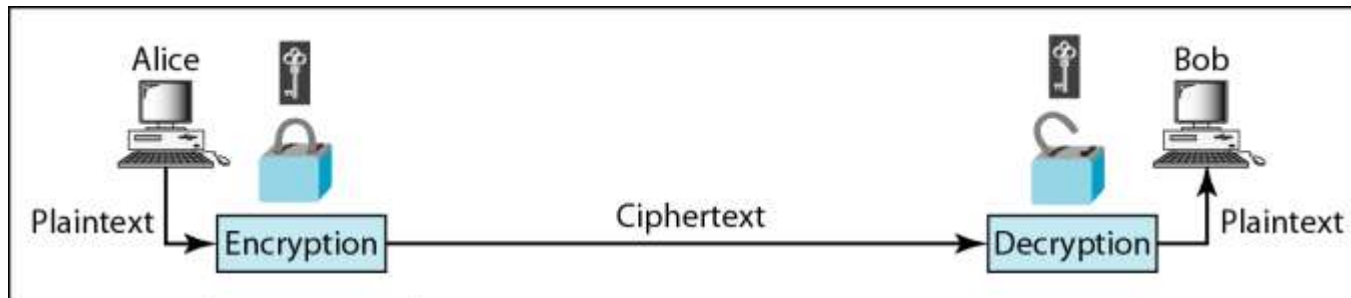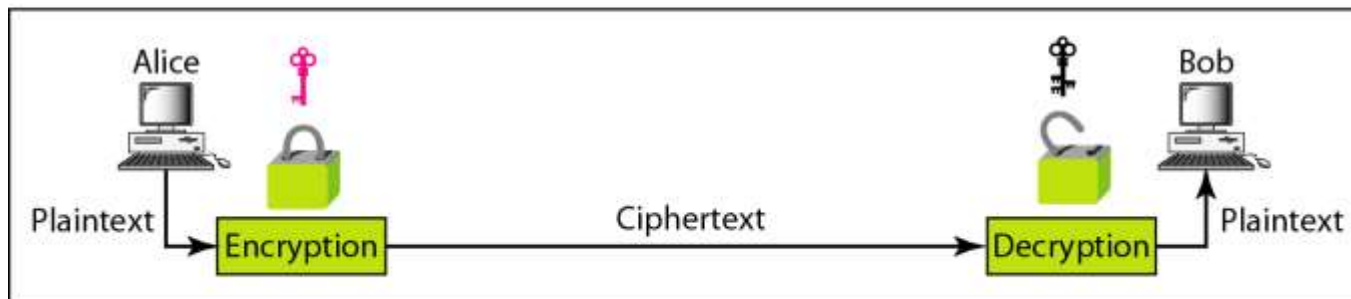|	
Secret key	Public key Private key
Symmetric-key cryptography	Asymmetric-key cryptography

Comparison between two categories of cryptography

a. Symmetric-key cryptography
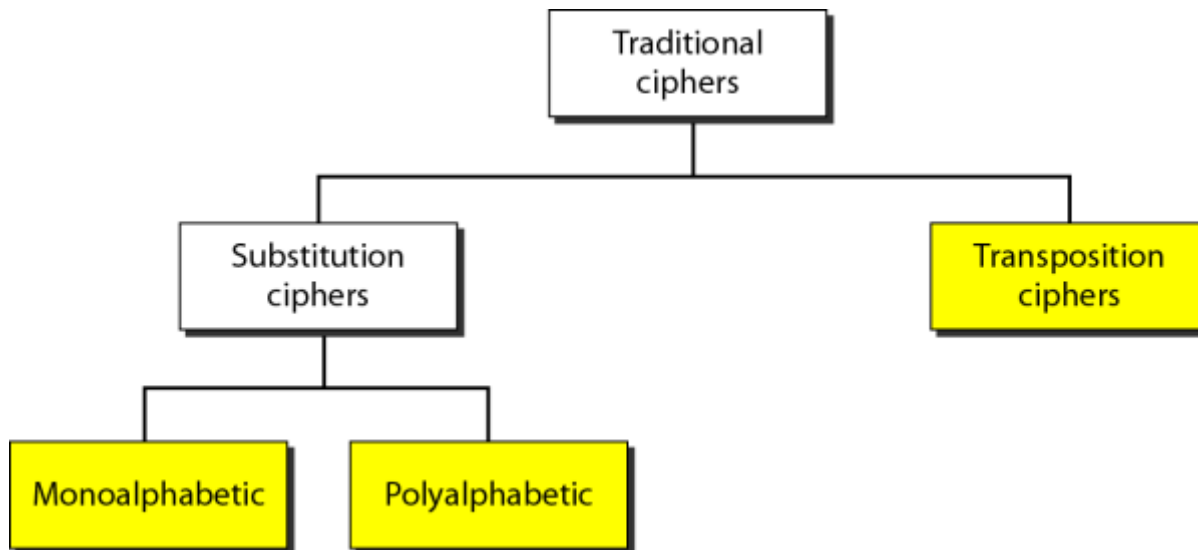

b. Asymmetric-key cryptography

SYMMETRIC-KEY CRYPTOGRAPHY

Symmetric-key cryptography started thousands of years ago when people needed to exchange secrets (for example, in a war). We still mainly use symmetric-key cryptography in our network security.

Traditional ciphers

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Thank You!