

SET Crypto

Date: 13.10.2008

Exercise 1

Give the security properties that an international airport should guarantee.

Exercise 2

Symmetric Cryptosystems Decrypt the following ciphers (they all correspond to an encryption method seen in class):

1. (very easy) 20-8-5-13-15-19-20-9-13-16-15-18-20-1-14-20-20-8-9-14-7-9-14-3-15-13-13-21-14-9-3-1-20-9-15-14-9-19-20-15-8-5-1-18-23-8-1-20-9-19-14-20-2-5-9-14-7-19-1-9-4
2. (easy) FDWV DUH LQWHQGHG WR WHOO XV WKDW QRW HYHUBWKLQJ
LQ QDWXUH KDV D IXQFWLRQ.
(Hint: B.C.)
3. (medium) OUFWIY ATNHAT DONNIG GHRTEI TYOODI ELRFUS
(Hint: observe the structure of the ciphertext)
4. (hard) JF CFEX REU KYREBJ WFI RCC KYV WZJY
(Hint: ROT-*N*)
5. (hard)
ESIRNDAVYIUPEOGCRDFNAOIYOTGSORIRCUAOEORNNSVOCISEWE
(Hint: The cipher has 50 letters)

Exercise 3

Churchyard cipher (simplified)



- **History:**

- This ciphertext appeared engraved on a tombstone in Trinity Churchyard (New York) in 1794.
- First published solution: 1896.

- **Questions:**

1. What kind of cipher is it?
2. Why is it so difficult to break? (Especially without the hint!)
3. What is the plaintext message?
4. What is the key?

• HINT: TIC TAC TOE =

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