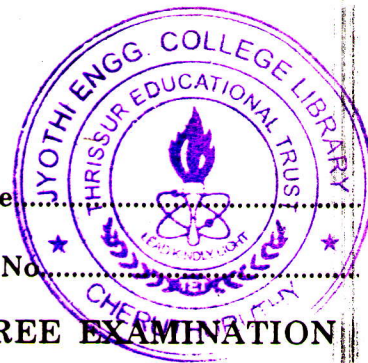


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Name

Reg. No.



SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2007

CS 04 702/IT 04 702—CRYPTOGRAPHY AND NETWORK SECURITY

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

- I.
- 1 State Fermat's theorem and Wilson's theorem.
 - 2 Discuss about steganography.
 - 3 Explain RSA algorithm with an example.
 - 4 Write a short note on MAC and hash functions.
 - 5 Discuss about quantum cryptography.
 - 6 Give the features of undeniable digital signatures.
 - 7 Draw the working model of Kerberos and explain.
 - 8 Discuss about PEM and PGP.

(8 × 5 = 40 marks)

Part B

Answer one question from each unit.

UNIT I

- II. 1 Explain the triple DES algorithm for encryption and give its features.

Or

- 2 (a) Discuss about the various security attacks and security services. (7 marks)
- (b) Give the role of random number generation in cryptography. (8 marks)

UNIT II

- III. 1 Discuss about elliptic curve cryptography and the various implementation issues in public key cryptography.

Or

- 2 Explain SHA-1 algorithm and compare with MD5.

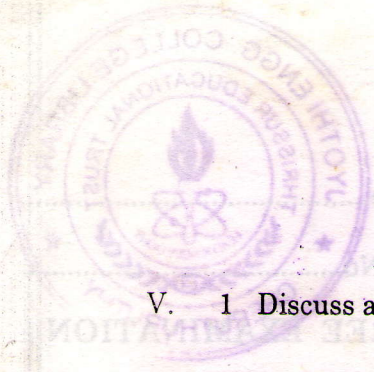
UNIT III

- IV. 1 Explain GOST digital signature algorithm and give the advantages.

Or

- 2 Explain any one key distribution algorithm and give its advantages.

Turn over



UNIT IV

V. 1 Discuss about IP security in detail.

Or

2 Discuss about web security in detail.

(4 × 15 = 60 marks)

Part A

Answer all questions

- 1 State Fermat's theorem and Wilson's theorem.
- 2 Discuss about steganography.
- 3 Explain RSA algorithm with an example.
- 4 Write a short note on MAC and hash functions.
- 5 Discuss about quantum cryptography.
- 6 Give the features of undeniable digital signatures.
- 7 Draw the working model of Kerberos and explain.
- 8 Discuss about PGM and PGP.

Part B

Answer one question from each unit.

Unit I

- 1 Explain the triple DES algorithm for encryption and give its features.
- 2 (a) Discuss about the various security attacks and security services.
(b) Give the role of random number generation in cryptography.

Unit II

- 1 Discuss about elliptic curve cryptography and the various implementation issues in public key cryptography.
- 2 Explain SHA-1 algorithm and compare with MD5.

Unit III

- 1 Explain GOST digital signature algorithm and give the advantages.
- 2 Explain any one key distribution algorithm and give its advantages.