

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE OCTOBER 2012

CS/IT 09 704—CRYPTOGRAPHY AND NETWORK SECURITY

(2009 Admissions)

Time: Three Hours

Maximum: 70 Marks

Part A

Short answer questions (one/two sentences)
Answer all questions.

- 1. Differentiate Confusion and Diffusion.
- 2. List out the measures to protect the Confidentiality of Information.
- 3. Define Brute-force attack.
- 4. Name the cryptographic keys used in PGP.
- 5. Mention the different types of Firewalls.

 $(5 \times 2 = 10 \text{ marks})$

Part B

Analytical / Problem solving questions.

Answer any four questions.

- 6. What common mathematical constants are used in RC5?
- 7. User A and B exchange the key using Diffie Hellman alg. Assume.

 $\acute{a} = 5$ q = 11 XA = 2 XB = 3. Find YA, YB, K.

- 8. Assume the client C wants to communicate server S using Kerberos procedure. How can it be achieved?
- 9. Discuss operating system security.
- 10. What is meant by SET? What are the features of SET?
- 11. What is a Screened Subnet Firewall?

 $(4 \times 5 = 20 \text{ marks})$

Part C

Descriptive/Analytical/Problem solving questions.

12. (a) Explain Transposition and Substitution ciphers with examples.

Or

(b) Explain DES Algorithm.

Turn over

13. (a) Explain Elliptic Curve Architecture.

Or

- (b) Describe about Trusted Systems.
- 14. (a) What are the steps involved in SET Transaction?

Or

- (b) Discuss X.509 Authentication Service in detail.
- 15. (a) Describe the architecture of IP Security.

Or

(b) Discuss Web Security in detail.

 $(4 \times 10 = 40 \text{ marks})$