

CBCS Scheme

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16/17SCN13

First Semester M.Tech. Degree Examination, Dec.2017/Jan.2018 Information and Network Security

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Illustrate symmetric cipher model in detail. (08 Marks)
b. Explain Hill cipher and polyalphabetic substitution cipher. (08 Marks)

OR

- 2 a. Describe stream cipher and block cipher in detail. (08 Marks)
b. Draw and explain DES algorithm. (08 Marks)

Module-2

- 3 a. Explain RSA algorithm in detail and also explain the security of RSA. (10 Marks)
b. With the help of neat block diagram explain public key cryptosystem. (06 Marks)

OR

- 4 a. Illustrate DHK with diagram [Diffie Hellman key exchange algorithm]. (08 Marks)
b. Describe Elgamal cryptographic system. (08 Marks)

Module-3

- 5 a. Explain symmetric key distribution using asymmetric encryption. (08 Marks)
b. Explain the PKIX X.509 architecture model and PKIX management function. (08 Marks)

OR

- 6 a. Explain remote user authentication principles. (08 Marks)
b. Demonstrate Kerberos version 4 in detail with diagram. (08 Marks)

Module-4

- 7 a. Explain the operation of 802.11i. (10 Marks)
b. Demonstrate the IEEE 802.11i pseudorandom function with diagram. (06 Marks)

OR

- 8 a. Explain SSL architecture in brief. (08 Marks)
b. Briefly explain the HTTP connection initiation and closure. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. Demonstrate and explain PGP. (10 Marks)
b. Write a short notes on S/MIME. (06 Marks)

OR

- 10 a. Explain IPSec applications in detail. (06 Marks)
b. In detail demonstrate Encapsulating Security Payload(ESP) with its format. (06 Marks)
c. Explain transport and tunnel model. (04 Marks)

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