

CBCS SCHEME

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15CS743

Seventh Semester B.E. Degree Examination, Jan./Feb. 2021 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. List the four classic crypto. (04 Marks)
b. Explain any three classic crypto cipher in brief. (12 Marks)

OR

- 2 a. Write the basic terminology of crypto, with neat diagram, indicating crypto as a Black box. (08 Marks)
b. List any three cipher and explain the following cipher in brief: (i) Cipher of election of 1876 (ii) Codebook Cipher (iii) Modern Crypto History (08 Marks)

Module-2

- 3 a. Explain in brief: (i) Birthday problem (ii) Birthday attack (08 Marks)
b. Explain in brief: (i) Non-cryptographic hashes (ii) HMAC (08 Marks)

OR

- 4 a. Explain in brief the Tiger hash. (08 Marks)
b. Explain in brief in the sense of uses for hash function: (i) Online bids (ii) Spam reduction (08 Marks)

Module-3

- 5 a. Explain with example diagram of dynamic password scheme. (08 Marks)
b. Explain the zero knowledge mechanism with diagram. (08 Marks)

OR

- 6 a. List and explain the AKE protocol goals. (08 Marks)
b. List the stages of protocol design and explain in brief. (08 Marks)

Module-4

- 7 a. Explain in brief the key life cycle with neat diagram. (08 Marks)
b. List and explain in brief the reasons why cryptographic keys have finite life times. (08 Marks)

OR

- 8 a. Explain the following in brief with respect to governing key management:
(i) Key management policies, practices and procedures (08 Marks)
(ii) Key generation ceremony
b. Explain in brief with diagram, 3-level key hierarchy and list the two advantages of deploying keys in a hierarchy. (08 Marks)

Module-5

- 9 a. Explain in brief the SSL key management. (08 Marks)
b. List and explain in brief the SSL design issues. (08 Marks)

OR

- 10 a. List and explain in brief the WEP Confidentiality and Integrity Weakness. (08 Marks)
b. List the four design issues emerging from the study of GSM and UMTS and explain each in brief. (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.