



CBCS SCHEME

15EC835

Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Network and Cyber Security

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Define various parameters that are associated with session state and connection state of SSL protocol. (08 Marks)
- b. Explain the additional alert codes in TLS over SSLVs. Describe SSL record protocol. (08 Marks)

OR

- 2 a. With relevant diagram explain the various phases of handshake protocol. (10 Marks)
- b. Discuss sequence of steps involved during message exchange in user authentication protocols of SSH. (06 Marks)

Module-2

- 3 a. Describe with flow diagram transmission and reception of PGP messages. (06 Marks)
- b. With relevant diagram explain the confidentiality and authentication services provided by PGP protocol. (10 Marks)

OR

- 4 a. Describe the various header fields defined in MIME. (04 Marks)
- b. Describe the functions provided by S/MIME. (04 Marks)
- c. With relevant diagram, explain the DKIM functional flow. (08 Marks)

Module-3

- 5 a. Draw a diagram to illustrate IP security scenario and also explain benefits of IPSec. (08 Marks)
- b. With relevant diagram, describe various fields in ESP packet format. (08 Marks)

OR

- 6 a. Draw and explain the IP traffic processing model for inbound and outbound packets. (10 Marks)
- b. With relevant diagram, describe IKE header and payload format. (06 Marks)

Module-4

- 7 a. Mention the types of cyber anti-pattern templates. Explain the various components of these templates. (10 Marks)
- b. Write a brief note on "No time for Security" anti-patterns. (06 Marks)

OR

- 8 a. Explain the various specialized skills that should be available on-demand in IT security shops. (05 Marks)
- b. What is the significance of signature based Malware detection and what are its limitations against polymorphic threats. (05 Marks)
- c. Write a brief note on forces in cyber anti-pattern. (06 Marks)

Module-5

- 9 a. Describe the architectural problem solving patterns. (08 Marks)
- b. Explain the role of Zachmann framework in cyber security. (08 Marks)

OR

- 10 a. Explain various technology included in HBS (Host Based Security). (10 Marks)
- b. Why is network administration on essential skill for hands-on-cyber security professional? (06 Marks)

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