

CBCS SCHEME

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15EC835

Eighth Semester B.E. Degree Examination, Dec.2023/Jan.2024 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 the various parameters that are associated with session state and connection state of SSL protocol. (10 Marks)
b. Explain the additional alert codes in TLS over SSLV3. (06 Marks)

OR

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

Module-2

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

OR

- 4 a. Describe the various header fields defined in MIME. (05 Marks)
b. With relevant diagram, explain the DKIM functional flow. (05 Marks)
c. Draw and explain Internet Mail Architecture. (06 Marks)

Module-3

- 5 a. Draw a diagram to illustrate the IP security scenario and explain benefits of IPsec. (08 Marks)
b. Draw and explain the IP traffic processing model for inbound and outbound packets. (08 Marks)

OR

- 6 a. With relevant diagram, describe various fields in ESP packet format. (08 Marks)
b. Explain key determination protocol and also list the features. (08 Marks)

Module-4

- 7 a. List and explain the various specialized skills that should be available on demand in IT security shops. (06 Marks)
b. Explain in brief, reputational, behavioural and entropy based malware detection. (06 Marks)
c. Write a brief note on signature-based Malware Detection versus polymorphic threats. (04 Marks)

OR

- 8 a. Explain the various fields in full cyber antipattern templates. (10 Marks)
b. Explain the "Can't patch dumb" antipattern. (06 Marks)

Module-5

- 9 a. Compare primitive model and composite model. (06 Marks)
b. Describe the key techniques for architectural problem solving patterns. (10 Marks)

OR

- 10 a. Briefly describe various technologies included in HBS (Host Based Security). (10 Marks)
b. Write a brief note on Managing Administrator and Root Accounts. (06 Marks)

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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.