

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

17EC835

Eighth Semester B.E. Degree Examination, Jan./Feb. 2023 Network and Cyber Security

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain the operation of SSL record protocol with a neat sketch. (10 Marks)
b. What is port forwarding? Explain local and remote port forwarding supported by SSH protocol in detail. (10 Marks)

OR

- 2 a. Explain the various parameters that are associated with session and connection state of SSL protocol. (10 Marks)
b. Explain 4 phases of handshake protocol in detail with a neat sketch. (10 Marks)

Module-2

- 3 a. Explain the PGP operational description for E-mail compatibility with a neat sketch. (10 Marks)
b. Illustrate the key components of the internet mail architecture with a neat diagram. (10 Marks)

OR

- 4 a. With relevant diagram, explain the confidentiality and authentication services provided by PGP protocol. (10 Marks)
b. Explain the DKIM functional flow with a neat diagram. (10 Marks)

Module-3

- 5 a. Describe the IP traffic processing for the outbound and inbound packets with relevant model sketch. (10 Marks)
b. List the importance features of IKE key determination algorithm. (05 Marks)
c. What parameters identify an SA and what parameters characterize the nature of particular SA. (05 Marks)

OR

- 6 a. Illustrate IP security scenario and explain benefits of IP sec, with a relevant diagram. (10 Marks)
b. Describe transport and tunnel modes used for IP sec ESP services bringing out their scope relevant to IPV4 and IPV6, with a neat diagram. (10 Marks)

Module-4

- 7 a. Explain the primal design forces in cyber security domains in detail. (06 Marks)
b. What are the significants of signature – based Malware detection and what are its limitations against polymorphic threats? (06 Marks)
c. Mention the types of cyber antipatterns templates and explain various components of those templates. (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.

OR

- 8 a. Explain the following :
i) Can't patch Dumb
ii) Never Read the Logs. (08 Marks)
b. List and describe forces in cyber anti-patterns in detail. (06 Marks)
c. Explain the antipatterns for policy – driven security certification. (06 Marks)

Module-5

- 9 a. Describe architectural problem solving patterns and types in detail. (10 Marks)
b. Explain the Zachman framework for enterprise architecture. (10 Marks)

OR

- 10 a. Why is network administration an essential skill for hands-on-cyber security professional? (06 Marks)
b. What is the necessity of system protection? Explain the Host Based Security (HBS). (08 Marks)
c. List the type re-imaging sequence for the Windows OS. (06 Marks)
