

CBCS SCHEME

21EC742



Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025 Network Security

Time: 3 hrs

Max. Marks: 100

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

Module-1

- 1 a. Discuss the principles of security in detail each with an example. (10 Marks)
- b. Explain Passive and Active attacks with a suitable diagram. (10 Marks)

OR

- 2 a. With a neat diagram, explain the model for Network security. (10 Marks)
- b. Describe the terms Viruses, Worms and Cookies. (10 Marks)

Module-2

- 3 a. Draw the Secure Socket Layer Protocol stack and describe the working in detail. (10 Marks)
- b. Discuss the four stages of Handshake Protocol with a diagram. (10 Marks)

OR

- 4 a. Draw and explain Secure Shell (SSH) Protocol. (10 Marks)
- b. What is the importance of HTTPS? Explain the connection initiation and closure of HTTPS. (10 Marks)

Module-3

- 5 a. Explain IP Security Architecture with a diagram. (10 Marks)
- b. Explain in brief Transport and Tunnel mode. (10 Marks)

OR

- 6 a. With a flow chart, explain processing for outbound and inbound packets. (10 Marks)
- b. Explain ESP packet format in detail. (10 Marks)

Module-4

- 7 a. Name the classes of intruders. Describe the intruder behavior pattern. (10 Marks)
- b. Define Intrusion detection. Explain rule based detection. (10 Marks)

OR

- 8 a. Describe the four phases of virus. (10 Marks)
- b. Explain in brief Virus counter measures. (10 Marks)

Module-5

- 9 a. List and explain firewall characteristics in brief. (10 Marks)
- b. Explain different types of Firewall. (10 Marks)

OR

- 10 a. Explain in detail various firewall configuration. (10 Marks)
- b. With a suitable diagram, explain distributed firewall. (10 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.