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18EC821

Eighth Semester B.E. Degree Examination, Dec.2024/Jan.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. Explain briefly the principles of security with suitable examples. **(10 Marks)**
   b. Explain any five types of criminal attacks. **(10 Marks)**

OR

2 a. Define the various phases of viruses and their categories. **(10 Marks)**
   b. Explain briefly packet spoofing and DNS spoofing attacks with suitable examples. **(10 Marks)**

Module-2

3 a. Define SSL connection and session state parameters. **(10 Marks)**
   b. Explain the message authentication code and pseudo random function used in TLSV3. **(10 Marks)**

OR

4 a. Define the fatal and alert codes of SSLV3. **(10 Marks)**
   b. Explain the basic concept of port forwarding. Also explain local port forwarding with a suitable example. **(10 Marks)**

Module-3

5 a. Define the parameters of security association database. **(10 Marks)**
   b. Explain briefly IP traffic processing. **(10 Marks)**

OR

6 a. Explain the top level format of Encapsulated Security Payload (ESP) packet. **(10 Marks)**
   b. Explain the IKE header and payload formats. **(10 Marks)**

Module-4

7 a. Explain three classes of intruders with an example for each. **(10 Marks)**
   b. With the neat diagram, explain distribution intrusion detection. **(10 Marks)**

OR

8 a. Explain the following malicious softwares :
   i) Backdoor
   ii) Logic bomb
   iii) Trojan horse. **(10 Marks)**
   b. Explain digital immune system with a neat diagram. **(10 Marks)**

Module-5

9 a. List the design goals and services provided by firewall. **(10 Marks)**
   b. Explain the capabilities and limitations of firewall. **(10 Marks)**

OR

10 a. Explain the following firewalls briefly :
       i) Application – level gateway ii) Circuit – level gateway. **(10 Marks)**
    b. Explain screened – subnet firewall system with a neat diagram. **(10 Marks)**

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