USN | | | | | | | | | | | **17EC835**

Eighth Semester B.E. Degree Examination, July/August 2022
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 four phases in SSL handshake protocol with a neat diagram.   (10 Marks)
   b. Describe TLS record protocol operation.   (06 Marks)
   c. Explain alert protocol in TLS.   (04 Marks)

OR

2 a. Explain SSH transport layer protocol packet exchange in detail.   (10 Marks)
   b. What is port forwarding? Explain local and remote forwarding.   (10 Marks)

Module-2

3 a. With the help of function modules and standardized protocols, explain internet mail architecture.   (10 Marks)
   b. Discuss the five header fields defined in MIME.   (06 Marks)
   c. Explain briefly the certificate processing of S/MIME.   (04 Marks)

OR

4 a. With relevant diagram, discuss the functional flow of DKIM protocol.   (06 Marks)
   b. Explain the PGP operational description of email compability with a neat diagram. (08 Marks)
   c. Briefly explain Simple Mail Transfer Protocol (SMTP) and mail access protocols (POP3, IMAP).   (06 Marks)

Module-3

5 a. Describe transport and tunnel modes used for IPSec ESP services, bringing out their scope relevant to IPV4 and IPV6.   (08 Marks)
   b. Explain IPSec architecture with neat diagram.   (04 Marks)
   c. With relevant diagram, describe various fields in ESP packet format.   (08 Marks)

OR

6 a. With the help of model, discuss the traffic processing for outbound and in bound packet.
                                                                                       (10 Marks)
   b. Explain IKEV2 exchanges with neat diagram.   (06 Marks)
   c. What is Security Association (SA)? Mention the three parameters of SA.   (04 Marks)

Module-4

7 a. Explain full cyber anti pattern template in detail. Explain the various components of these templates.   (10 Marks)
   b. List the cyber security anti pattern and explain any two antipattern organizational policies that would mitigate vulnerabilities.   (10 Marks)

OR

8 a. Write a brief note on forces in cyber pattern. (06 Marks)
   b. Explain the anti pattern for policy-driven security domain security certification. (08 Marks)
   c. Write a brief note on "can't patch dump" anti pattern. (06 Marks)

Module-5

9 a. How many rows and columns are in Zachman frame work? Explain in detail. (10 Marks)
   b. Explain any two key techniques for architectural problem solving patterns. (10 Marks)

OR

10 a. List the key techniques in architectural problem solving pattern. (04 Marks)
   b. How to manage administrator and root accounts on window, Linux and VM ware platform? Explain in brief. (06 Marks)
   c. Explain various technology included in HSB. (10 Marks)

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