15EC835

USN ☐☐☐☐☐☐☐☐☐☐

Eighth Semester B.E. Degree Examination, Aug./Sept.2020
Network & Cyber Security

Time: 3 hrs.   Max. Marks: 80

Note: *i) For Regular Students: Answer any FIVE full questions irrespective of modules.*
ii) For Arrear Students : Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1	a.	Differentiate between SSL connection and SSL session.	(04 Marks)
	b.	Discuss the overall operation of SSL record protocol.	(06 Marks)
	c.	What is port forwarding? Discuss the two types of port forwarding supported by SSH protocol.	(06 Marks)
2	a.	Explain the SSL handshake protocol action.	(08 Marks)
	b.	Discuss the SSH protocol stack in detail.	(08 Marks)

Module-2

3	a.	Explain the operation of PGP protocol with respect to confidentiality service.	(05 Marks)
	b.	Discuss the transmission and reception of PGP manages.	(05 Marks)
	c.	Discuss the certificate processing of S/MIME.	(06 Marks)
4	a.	Discuss the header fields defined in MIME.	(04 Marks)
	b.	Discuss the operation of DKIM protocol.	(05 Marks)
	c.	With the help of diagram discuss the functional flow of DKIM protocol.	(07 Marks)

Module-3

5	a.	Which are the two modes of functionality supported by IPsec.	(04 Marks)
	b.	With the help of a model discuss the IP traffic processing for outbound and inbound packets.	(08 Marks)
	c.	Discuss the basic approaches to bundle Security Association (SA).	(04 Marks)
6	a.	What parameters identify an SA and what parameters characterize the nature of a particular SA.	(04 Marks)
	b.	Discuss the top level format of an Encapsulating Security Payload (ESP) packet.	(08 Marks)
	c.	List the important features of IKE key determination algorithm.	(04 Marks)

Module-4

7	a.	Discuss the document driven certification and accreditation with respect to antipattern.	(04 Marks)
	b.	Compare signature based malware detection versus polymorphic threats.	(04 Marks)
	c.	Discuss the primal design forces in the cyber security domain.	(08 Marks)
8	a.	Discuss the two cyber antipattern templates.	(08 Marks)
	b.	List the cyber security antipattern and explain any two antipattern organizational policies that would mitigate vulnerabilities.	(08 Marks)

Module-5

9 a. Compare primitive models versus composite models.   (04 Marks)
   b. How does the zachman framework help with cyber security? Explain.   (04 Marks)
   c. List the key techniques in architectural problem solving patterns and explain them.

                                                                                            (08 Marks)

10 a. How to manage administrator and root accounts on windows, Linux and VMware platform?
       Explain.   (05 Marks)
    b. Write the setup sequence for desktop pedestal.   (05 Marks)
    c. What is the necessity of system protection? List and explain the Host Based Security (HBS)
       technologies used for this purpose.   (06 Marks)

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