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10EC832

Eighth Semester B.E. Degree Examination, June/July 2015
Network Security

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting atleast TWO questions from each part.***

PART – A

1 a. Explain X·800 security mechanisms, in detail. **(10 Marks)**

b. Differentiate between active and passive attacks. **(04 Marks)**

c. In S –DES, 10 bit key is 1011010011 find the sub keys k_1 and k_2 if : $P_{10} = 35274101986$; $P_8 = 637485109$. **(06 Marks)**

2 a. Decrypt the cipher text "CQSUBJNR" using Hill cipher technique with the key : $\begin{bmatrix} 7 & 8 \\ 19 & 3 \end{bmatrix}$. Find the plain text [Hint : a = 0, b = 1, - - - - - z = 25]. **(10 Marks)**

b. How are the disadvantages of ECB mode of operation overcome in the CBC mode of operation? **(10 Marks)**

3 a. Perform encryption and decryption using RSA if p = 7, q = 11, e = 13 and M = 5. **(08 Marks)**

b. Explain the public key distribution of secret key with confidentiality and authentication. **(04 Marks)**

c. With neat schematics, explain message authentication code. **(08 Marks)**

4 a. What is a digital signature? List the properties and requirements of digital signature. **(10 Marks)**

b. Discuss the various approaches of one – way authentication protocol. **(10 Marks)**

PART – B

5 a. What are the services provided by SSL record protocol for SSL connections? Explain overall operation of SSL record protocol. **(10 Marks)**

b. List and explain the SET participants with neat diagram. **(10 Marks)**

6 a. Explain the techniques used for intrusion. **(06 Marks)**

b. Write short notes on honey pots. **(04 Marks)**

c. Explain password selection strategies in detail. **(10 Marks)**

7 a. Write short notes on Trojan horses. **(05 Marks)**

b. Explain the various phases that a virus undergoes during its life time. **(05 Marks)**

c. Discuss the two most important advanced antivirus techniques. **(10 Marks)**

8 a. List and explain the different attacks on packet filtering routers along with appropriate counter measures. **(10 Marks)**

b. Explain briefly the concept of trusted systems. **(10 Marks)**

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