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10EC832

Eighth Semester B.E. Degree Examination, Dec.2018/Jan.2019
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 the general model of Network security system. **(08 Marks)**

b. Explain play fair rules for encryption, using play fair key – "STORY" Encrypt the plain text "We will meet tomorrow". **(12 Marks)**

2 a. With neat diagram explain S-DES key generation algorithm. In S-DES 10 bit key is 1011001010 find the values of sub keys k_1, k_2 if

P_{10} – 3 5 2 7 4 10 1 9 8 6

P_8 – 6 3 7 4 8 5 10 9

Left circular shift by 1-bit for both rounds. **(10 Marks)**

b. With neat diagram explain single round DES Algorithm. **(10 Marks)**

3 a. Explain the Diffie Hellman key exchange algorithm. **(06 Marks)**

b. What are the requirements of a public key cryptosystem? **(06 Marks)**

c. Perform Encryption and Decryption using the RSA algorithm for p = 3, q = 11, e = 7, m = 5. **(08 Marks)**

4 a. Describe the Digital Signature Algorithm. **(10 Marks)**

b. With neat diagram explain the basic uses of Hash function. **(10 Marks)**

PART – B

5 a. Explain the sequence of events that are required for a transaction in SET. **(10 Marks)**

b. Explain the various phases of SSL handshake protocol. **(10 Marks)**

6 a. Define Intrusion Detection and explain the architecture of a distributed intrusion detection system. **(08 Marks)**

b. Explain the password selection strategies in detail. **(08 Marks)**

c. Mention the classes of intruders and briefly define them. **(04 Marks)**

7 a. With a diagram explain digital immune system. **(10 Marks)**

b. Explain the different types of viruses. **(10 Marks)**

8 a. Define firewall? With neat diagrams briefly explain the three types of firewalls. **(10 Marks)**

b. Explain briefly about the firewall configurations. **(10 Marks)**

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