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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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, $42+8 = 50$, will be treated as malpractice.