(T) Roll No. .....

PAPER ID—16483

M.Tech. EXAMINATION, 2024

(Third Semester)

COMPUTER SCIENCE AND ENGINEERING

Code : 17CSE23C2

Network Security

Time : 3 *Hours* *Maximum Marks :* 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) Write the difference between Steganography and Cryptography. 5

(b) Explain the avalanche effect. 5

(c) Discuss Electronic Money. 5

(d) What is Firewall ? 5

Unit I

2. What is Cryptographic system ? Explain in detail ? Also write about symmetric and asymmetric key models. 20

3. (a) What is symmetric cipher model ? Explain with diagram. 10

(b) How OSI architecture focuses on security attacks and security services ? 10

Unit II

4. Explain the RSA algorithm by taking a suitable example. 20

5. (a) Explain the RCS algorithm. 10

(b) What is public key cryptography ? Explain the process of Data Encryption standard with their algorithm. 10

Unit III

6. Explain Secure Hyper Text Transfer Protocol (SHTTP). Also highlight the feature of Time Stamping Protocol (TSP). 20

7. (a) Describe the concept of Internet Protocol Security. Explain the various applications of IPSec. 10

(b) How Secure Socket Layer play an important role in Internet security ? Explain briefly. 10

Unit IV

8. What is Kerberos authentication service ? Explain in detail with its types. Also write its drawbacks and limitations. **20**

9. How Firewall plays important role in system security ? Explain the various types of Firewalls in detail. **20**