

Code No.: CY514PE/IT511PE

R20

H.T.No.

8

R

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

III-B.TECH-I-Semester End Examinations (Supply) - December- 2025

CRYPTOGRAPHY & NETWORK SECURITY

(CSC,IT)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A

(20 Marks)

1. a) Discuss about Principles of Security. [2M]
- b) What is the difference between cryptography and Steganography? [2M]
- c) Explain various modes of operations in block ciphers. [2M]
- d) List important design considerations for a stream cipher. [2M]
- e) Compare Kerberos version 5 and version 4. [2M]
- f) What is the need of Elgamal Digital Signature? [2M]
- g) List out the Web Security Considerations. [2M]
- h) Interpret the use of Mobile Device Security. [2M]
- i) What is Encapsulating security payload? [2M]
- j) Differentiate between MIME & S/MIME. [2M]

PART-B

(50 Marks)

2. Explain about transposition and substitution techniques. [10M]
- OR**
3. Classify and explain different security mechanisms. [10M]
4. Illustrate the working of the DES algorithm. [10M]
- OR**
5. Discuss in detail about the Diffie – Hellman key exchange algorithms. [10M]
6. Explain about HMAC with an example. [10M]
- OR**
7. Define Public Key. What are the three broad categories of public-key Cryptosystems? What requirements must a public-key cryptosystems fulfill to be a secure algorithm? [10M]
8. Demonstrate the working of SSH in detail. [10M]
- OR**
9. Explain in detail about IEEE 802.11i Wireless LAN. [10M]
10. Identify and explain the components of IP Security Architecture. [10M]
- OR**
11. Write about Secure Inter branch payment Transactions. [10M]
