

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]
