

Code No.: DS621PE

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**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**III-B.TECH-II-Semester End Examinations (Regular) - June- 2024**  
**CRYPTOGRAPHY AND NETWORK SECURITY**  
**(CSD)**

[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 and may have a, b, c as sub questions.

**PART-A**

(20 Marks)

1. a) Define Encryption, Decryption with examples. [2M]
- b) What are the key principles of security? [2M]
- c) Write about strength of DES algorithm. [2M]
- d) What are the principles of public key cryptosystems? [2M]
- e) Write a short note on distribution of public keys. [2M]
- f) What are the Message Authentication requirements? [2M]
- g) Discuss in detail about secure electronic transaction. [2M]
- h) What is HTTPs? Explain. [2M]
- i) Explain Cross Site Scripting Vulnerability. [2M]
- j) What are the key components of internet mail architecture? [2M]

**PART-B**

(50 Marks)

2. List and explain various types of Security Attacks. [10M]
- OR**
3. Illustrate various substitution and transposition cryptography techniques. [10M]
4. Explain RSA Algorithm with suitable example. [10M]
- OR**
5. Define Stream Cipher and Construct the algorithm used to encrypt stream Symmetric ciphers. [10M]
6. Discuss HMAC and CMAC with Example. [10M]
- OR**
7. Explain the approaches for Digital Signatures based on Public Key Encryption. [10M]
8. Explain 802.11 LAN overview. [10M]
- OR**
- 9.a) Compare and contrast SSL versus TLS [5M]
- b) Write a short note on wireless security. [5M]
10. Write different cryptographic algorithms used in S/MIME. Explain how S/MIME is better than MIME. [10M]
- OR**
11. List and explain the PGP services and explain how PGP message generation is done with a neat diagram. [10M]

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