SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.
M.Sc.Computer Science - END SEMESTER EXAMINATIONS - NOV'2024
SEMESTER - III
23PCSET3A03 - Cryptography and Cyber Security

Total Duration : 2 Hrs. 30 Mins.   Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Illustrate the concept of block cipher modes, including ECB, CBC, and OFB, and their uses.

2. Explain the concept of SQL injection attacks, including their impact on databases and prevention methods.

3. Classify different types of wireless security threats, including unauthorized access, eavesdropping, and jamming.

4. Explain how a packet sniffer uses the RSA algorithm to intercept and decrypt secure network traffic.

5. Solve a problem using the SHA-256 hash function, including calculating the hash value.

6. Enlist cybercrimes into categories, including hacking, phishing, spamming, and denial-of-service attacks.

7. Elucidate the concept of Network Access Control (NAC) and its importance in network security.

8. Distinguish between AES, DES, and RSA algorithms in image encryption, including their strengths and weaknesses.

Section C

I - Answer any **TWO** questions $(2 \times 10 = 20$ Marks)

9. Explain the Advanced Encryption Standard (AES) algorithm, including block size, key size, and encryption process. Compare AES with DES and discuss its advantages.

10. Classify different types of digital signature algorithms, including DSA and ECDSA.

11. Distinguish between password cracking tools and techniques, including dictionary attacks and brute-force attacks.

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12. Differentiate between cloud securities models, including public, private, and hybrid clouds.

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II - Compulsory question $(1 \times 10 = 10$ Marks$)$

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13. Classify different types of keylogging software, including kernel-level and user-level keyloggers.

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