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. END SEMESTER EXAMINATION APRIL/NOV - 2021

SEMESTER - III

18PCSCE3004 - Cryptography and Network Security

Total Duration : 3 Hrs		**Total Marks : 75**	
MCQ	: 30 Mins	MCQ	: 15
Descriptive	: 2 Hrs.30 Mins	Descriptive	: 60

Section B

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

1. Explain the Conventional Encryption model.
2. Discuss the principles of public key cryptography.
3. Illustrate the working of Extended Eucledian Algorithm and its applications.
4. Discuss about Diffie Hellman Key Exchange.
5. Show the use of prime numbers in cryptography with examples.
6. With appropriate example explain the Chinese remainder theorem.
7. Explain about Digital Signatures and highlight its importance.
8. Describe Euler's Theorem with appropriate proof.

Section C

Part A

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

9. Examine the AES Algorithm with step by step detailed explanation.
10. Compare substitution and transposition ciphers.
11. Ascertain the importance of the RSA Algorithm.
12. Justify the significance of Message Authentication codes.

Part B

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

13. Analyze the features of Hash Functions. Also explain the Secure Hash Algorithm.