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M.Sc. (Semester-IV) Examination, June-2025

(Backlog)

COMPUTER SCIENCE

(Network Security)

Time Allowed : Three Hours

Maximum Marks : 70

Note : This question paper is divided into **four** sections. **All** section are **compulsory**. Attempt question as per instructions given in each sections.

SECTION-A

(Objective Type Questions)

Note : Attempt **any ten** questions. Each question carries **1** mark. [10×1=10]

1. (i) CHAP stands for _____.
- (ii) An algorithm in encryption is called _____.

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(1)

[P.T.O.]

- (iii) _____ can be used to protect any document on the internet.
- (iv) The study of encryption method is known as _____.
- (v) DDoS stands for _____.
- (vi) The information that gets transformed in encryption is _____.
- (vii) Mechanism to protect private network from outside attack is :
- (a) Formatting
 - (b) Digital signature
 - (c) Antivirus
 - (d) Firewall
- (viii) Protocol refers to :
- (a) Rules
 - (b) Method
 - (c) Rules and Method
 - (d) None of these

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(2)

- (ix) The digital signature standard proposed in :
- (a) 1991
 - (b) 1993
 - (c) 1995
 - (d) 1997
- (x) Secure hash algorithm is developed by :
- (a) NIST
 - (b) IEE
 - (c) ANSI
 - (d) None of the above
- (xi) Which of these is a part of network identification?
- (a) User ID
 - (b) Password
 - (c) OTP
 - (d) Fingerprint

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(3)

[P.T.O.]



(xii) The method of hiding the secrets is :

- (a) Cryptography
- (b) Steganography
- (c) Stenography
- (d) Cryptanalysis

SECTION-B

(Very Short Answer Type Questions)

Note: Attempt **any five** questions. Each question carries 2 marks.(Word limit : 25-30 words) : [5×2=10]

2. (i) What is Spywares?
- (ii) What is hacking?
- (iii) Explain SET.
- (iv) Define Digital Signature.
- (v) Define AES.
- (vi) What is IP security?
- (vii) Define Hash algorithm.

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SECTION-C

(Short Answer Type Questions)

Note: Attempt **any five** questions. Each question carries 4 marks.(Word limit : 250 words) [5×4=20]

3. (i) Explain Euclid's algorithm in detail.
- (ii) What do you mean by DES? Explain.
- (iii) What is malicious software?
- (iv) What is IDS? Explain.
- (v) What do you mean by web security? Explain.
- (vi) Explain Authentication protocol.
- (vii) What do you mean by key management? Explain.

SECTION-D

(Essay Type Questions)

Note: Attempt **any three** questions. Each question carries 10 marks.(Word limit : 500 words) [3×10=30]

4. (i) Explain various mathematical tools for cryptography in detail.

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- (ii) Explain design principles of block ciphers in detail.
- (iii) What do you mean by RSA algorithm? Explain.
- (iv) Explain SSL in detail.
- (v) What do you mean by Firewall? Explain its types.

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