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H-6041

M.Sc. (Semester-IV) Examination, July 2022

INFORMATION TECHNOLOGY

(Network Security)

Time Allowed : Three Hours

Maximum Marks : 70

Minimum Passing Marks : 25

Note : Question paper is divided into four sections. Attempt questions of all four sections as per direction. Distribution of marks is given in each section.

SECTION - A

(Objective Type Questions)

Note : Attempt **any ten** questions. Each question carries **1** mark.

1. Objective Type / Fill in the blank / Multiple Choice Type :

[1×10=10]

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(1)

[P.T.O.]

- (i) TCP Port number for http Services is ____ .
- (ii) ____ is a program created by Farmer and Venema for auditing.
- (iii) Default subnet mask is _____ for 192.168.0.1.
- (iv) _____ uses pretty good privacy algorithm.
- (v) DDoS stands for ____ .
- (vi) Which is not an objective of network security?
 - (a) Identification
 - (b) Authentication
 - (c) Access control
 - (d) Lock
- (vii) A small program that changes the way a computer operator :
 - (a) Worm
 - (b) Trojan

- (c) Bomb
 - (d) Virus
- (viii) Which of these a part of network identification?
- (a) User ID
 - (b) Password
 - (c) OTP
 - (d) Finger Print
- (ix) An algorithm in encryption is called ____ .
- (a) Algorithm
 - (b) Procedure
 - (c) Cipher
 - (d) Module
- (x) Network security provides :
- (a) Access control
 - (b) Authentication

- (c) Both (a) and (b)
 - (d) None of these
- (xi) WTLS stands for :
- (a) Wireless Transport Security Layer
 - (b) Wireless Transfer System Layer
 - (c) Wireless Transfer Security Layer
 - (d) Wireless Transport System Layer
- (xii) An indirect form of surveillance :
- (a) Honey Pot
 - (b) Logical
 - (c) Security
 - (d) Intrusion

SECTION - B

(Very Short Answer Type Questions)

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

2. (i) Explain digital signature.
- (ii) What is firewall?
- (iii) Write short notes about RSA.
- (iv) Explain AES.
- (v) What do you mean by web security? Explain.
- (vi) What is SET?
- (vii) What is spoofing? Explain.

SECTION - C

(Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **4** marks. Maximum word limit is 250 words. [4×5=20]

3. (i) Explain symmetric Cipher model.
- (ii) What do you mean by Pretty Good Privacy (PGP)?
- (iii) Explain elliptic curve cryptography.

- (iv) Explain Euclid's algorithm.
- (v) Explain Kerberos.
- (vi) Explain IP security in detail.
- (vii) What do you mean by system security? Explain its types.

SECTION - D

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries **10** marks. Maximum word limit is 500 words. [3×10=30]

4. (i) Explain various mathematical tools for cryptography.
- (ii) What do you mean by DES? Explain its strength.
- (iii) Explain HASH and MAC algorithm.
- (iv) What is SSL? Explain.
- (v) What do you mean by malicious software? Explain in brief.

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