1T01235 - T.E.(Information Technology Engineering)(SEM-V)(Choice Base Credit Grading System) (R-20-21) (C Scheme) / 32422 - Computer Network Security

QP CODE: 10011948 DATE: 24/11/2022

Time (3 Hours) [Total Marks 80]

N. B:

1. Question No. 1 is Compulsory.
2. Solve any THREE from Question No. 2 to 6.
3. Draw neat well labelled diagram wherever necessary

Q. 1 a) A secure e-voting system is to be designed. Discuss the security goals that must met and enlist mechanisms for the same. (5)

b) Explain principle elements of NAC (5)

c) Enlist properties & applications of Hash function. (5)

d) Describe different types of Denial of service attacks. (5)

Q2. a) Explain the need of Network Access Control in Enterprise Networks. Explain the major NAC enforcement methods. (10)

b) Explain in detail with diagram, How Kerberos can be used for authentication. (10)

Q3. a) How is security achieved in the transport and tunnel modes of IPSEC? Describe the role of AH and ESP. (10)

b) Define Malware. Explain its types in detail (10)

Q4. a) Explain Firewall & its types along with advantages and disadvantages (10)

b) Explain different modes of operation of Block ciphers (10)

Q5. a) Explain classical encryption techniques with example (10)

b) In an RSA system, given N=91 e=5 Calculate Φ(n),p, q and private key d. What is the cipher text when you encrypt message m=25 using the public key. Also perform decryption. (10)

Q6. Write Short Notes on ANY 4: (20)

a) SSL protocol stack
b) Compare and contrast AES and DES
c) IDS and its types
d) Use cases for NAC
e) Digital Signature

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