Total No. of Questions :7]

P1016

SEAT No. :

[Total No. of Pages : 3

[5319]-4003
S.Y.B.C.A
SCIENCE
BCA-403; Advanced Networking And Network Security
(Semester-IV)

Time :3Hours]
[Max. Marks :70
Instructions to the candidates:
1) *Question No-1 (A and B) are compulsory.*
2) *Attempt any two questions from group-I.*
3) *Attempt any two questions from group-II.*
4) *Figures to the right indicate full marks.*

Q1) A) Choose the approprite options. **[7]**

a) SCTP is a _____ transport layer protocol.

    i) Reliable   ii) Connectionless

    iii) Connection oriented   iv) None of these

b) In a_____the key is called the secret key.

    i) Symmetric key   ii) Asymmetric key

    iii) Either (i) or (ii)   iv) Key

c) How many keys does the triple DES algorithm use?

    i) 2   ii) 3

    iii) 4   iv) 2 or 3

d) Asymmetric key is also called_____

    i) Public key   ii) Secret key

    iii) Private key   iv) Plain key

e) Following are the internet security threats.

    i) TCP   ii) Malware and spam

    iii) (i) & (ii)   iv) Datamal

P.T.O.

f) Tunnel mode IPSec protects the_____ .

    i) IP header   ii) Entire IP packet

    iii) IP payload   iv) One IP layer

g) PKC stands for _____.

    i) Public key case   ii) Public key cryptography

    iii) Public key cipher   iv) None of these

B) Answer in one sentence   **[7]**

a) What is SMTP?

b) What is process-to-process Delivery.

c) Define term- stegnography.

d) State the types of DES.

e) Define trapdoor functions.

f) What is digital certificate?

g) What is intrusion?

Group-I

Q2) Answer the following questions.

a) State difference between stream & block cipher.   **[5]**

b) List possible types of attacks and explain it in details.   **[5]**

c) Explain UDP in details with diagram?   **[4]**

Q3) Answer the following questions.

a) What are the advantages and disadvantages of Diffie-Hellman?   **[4]**

b) Convert following text in to cipher text message using one time pad
    NCBTZQARX. Message plain text-"How are you"   **[4]**

c) Discuss different UDP operations?   **[3]**

d) Explain password based Authentication?   **[3]**

Q4) Answer the following questions.

    a)   Explain structure of digital certificate? **[4]**

    b)   What are various uses of message digest? **[4]**

    c)   Explain four essential control excercised by a firewall? **[3]**

    d)   What are advantages of Asymmetric key cryptography. **[3]**

Group-II

Q5) Answer the following questions:

    a)   Explain RSA Algorithm in detail. **[5]**

    b)   Explain virtual private network (VPN) and its features. **[5]**

    c)   Explain Architecture of TLS in details. **[4]**

Q6) Answer the following questions:

    a)   Generate public and private keys using RSA algorithm, Given:P=11,q=3. **[4]**

    b)   Describe Audit records in detail. **[4]**

    c)   What are two main challenges faced by symmetric key algorithms? **[3]**

    d)   Discuss VPN tunneling protocol? & Give any two advantage of VPN? **[3]**

Q7) Answer the following questions:

    a)   Explain CBC mode in details. **[4]**

    b)   What are two basic ways of transforming plaintext to ciphertext? **[4]**

    c)   Describe Multiplening in details. **[3]**

    d)   How can caesar cipher crack? **[3]**

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