21222

3 Hours / 70 Marks

Seat No.

15 minutes extra for each hour

Instructions :   (1)   All Questions are *compulsory.*

(2)   Answer each next main Question on a new page.

(3)   Illustrate your answers with neat sketches wherever necessary.

(4)   Figures to the right indicate full marks.

(5)   Assume suitable data, if necessary.

(6)   Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1.   **Attempt any FIVE of the following :**   **10**

(a)   Define following terms :

(i)   Confidentiality

(ii)   Accountability

(b)   Explain the terms :

(i)   Shoulder surfing

(ii)   Piggybacking

(c)   Define term cryptography.

(d)   Classify following cyber crimes :

(i)   Cyber stalking

(ii)   Email harassment

    (e)   Differentiate between viruses & worms (Any two).

    (f)   Define firewall. Enlist types of firewalls.

    (g)   Define AH & ESP with respect to IP security.

2.   **Attempt any THREE of the following :**   **12**

    (a)   Define following terms :

        (i)   Operating System Security

        (ii)   Hot fix

        (iii)   Patch

        (iv)   Service pack

    (b)   Explain the mechanism of fingerprint & voice pattern in Biometrics.

    (c)   Differentiate between symmetric & asymmetric key cryptography.

    (d)   Write & explain DES algorithm.

3.   **Attempt any THREE of the following :**   **12**

    (a)   Describe the features of DAC access control policy.

    (b)   Consider plain text "COMPUTER ENGINEERING" & convert given plain text into cipher text using 'Caesar Cipher' with shift of position three - write down steps in encryption.

    (c)   Differentiate between host-based & network based IDS.

    (d)   Define access control & explain authentication mechanism for access control.

4. **Attempt any THREE of the following :** **12**

    (a)   Enlist substitution techniques & explain any one.

    (b)   Explain DMZ.

    (c)   Differentiate between firewall & IDS.

    (d)   Explain Email security in SMTP.

    (e)   Explain Digital Signature in Cryptography.

5. **Attempt any TWO of the following :** **12**

    (a)   Define Information. Explain basic principle of information security.

    (b)   Define & explain :

        (i)   Circuit Gateway

        (ii)   Honey Pots

        (iii) Application Gateway

    (c)   Explain the working of Kerberos.

6. **Attempt any TWO of the following :** **12**

    (a)   Explain DOS with neat diagram.

    (b)   Explain Public Key Infrastructure with example.

    (c)   Explain Policies, configuration & limitations of Firewall.

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