Model Questions

SKR/KW/24/2184

Faculty of Science & Technology
Eighth Semester B.E. (Information Technology) (C.B.S.) Examination
CYBER SECURITY
Elective—IV

Time—Three Hours]   [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry marks as indicated.

(2) Solve Question No. **1 OR** Question No. **2**.

(3) Solve Question No. **3 OR** Question No. **4**.

(4) Solve Question No. **5 OR** Question No. **6**.

(5) Solve Question No. **7 OR** Question No. **8**.

(6) Solve Question No. **9 OR** Question No. **10**.

(7) Solve Question No. **11 OR** Question No. **12**.

(8) Due credit will be given to neatness and adequate dimensions.

(9) Assume suitable data wherever necessary.

(10) Illustrate your answers wherever necessary with the help of neat sketches.

1. (a) Examine various categories of security attacks. Also compare passive and active attacks.   6

    (b) Encrypt the message "Welcome to Information Technology" with the key "computer" using play fair cipher.   7

                                OR

2. (a) Explain 3 block cipher modes of operation.   6

    (b) Solve using hill cipher Plain Text : pay more money key :

        7   3   1
        13   2   5
        12   4   6   7

3. Write short notes on :

    (i) Traffic confidentiality

    (ii) Hill cipher

    (iii) Steganography.   13

                                OR

4. (a) Differentiate differential cryptanalysis and linear cryptanalysis.   7

    (b) Explain different pseudo random number generator algorithm.   6

MI—8187   1   (Contd.)

Model Questions

5. (a) Describe with justification RSA in detail.   7

    (b) Contrast diffie hellmen keyexchange Algorithm with Limitations.   7

OR

6. (a) Give the design of MD5 Algorithm.   7

    (b) Compare the following hash algorithms :

    (i)   MD – 5

    (ii) SHA – 1

    (iii) RIPEMD – 160.   7

7. (a) Blowfish is not suitable for limited memory applications. Justify.   6

    (b) Explain session key, master key and centralized key control and decentralized key control.   7

OR

8. Solve the simultaneous congruencies $x \equiv 6 \pmod{11}$, $x \equiv 13 \pmod{16}$, $x \equiv 9 \pmod{21}$, $x \equiv 19 \pmod{25}$ using Chinese remainder theorem.   13

9. (a) Describe IP security architecture.   7

    (b) Explain SSL in detail and phases.   6

OR

10. (a) (i) What is digital signature ? Explain various properties of digital signature.

    (ii) Explain session key, master key and centralized key control and decentralized key control.   7

    (b) Compare the SSL and the TLS.   6

11. (a) What is intruder ? Explain intrusion techniques.   5

    (b) What is virus and worms ? Explain different types of virus.   5

    (c) Explain packet filtering firewall.   4

OR

12. Explain SET in detail.   14

Model Questions

PRS/KS/24/2511

Faculty of Science and Technology
B.E. (Information Technology) Semester—VIII (C.B.S.) Examination
CYBER SECURITY
Elective – IV

Time : Three Hours]   [Maximum Marks : 80

<u>INSTRUCTIONS TO CANDIDATES</u>

(1) All questions carry marks as indicated.
(2) Solve Question **1 OR** Question No. **2**.
(3) Solve Question **3 OR** Question No. **4**.
(4) Solve Question **5 OR** Question No. **6**.
(5) Solve Question **7 OR** Question No. **8**.
(6) Solve Question **9 OR** Question No. **10**.
(7) Solve Question **11 OR** Question No. **12**.

1. (a) Explain cyber crime and information security. Give classification of cyber crimes.   6
    (b) State the effect of Industrial espionage on industries.   7

OR

2. (a) Explain how crimes are emanating from usenet newsgroup.   6
    (b) Write short notes on :   7
        (i)   Cyber Defamation.
        (ii) Web Jacking.

3. (a) With proper example explain passive attacks and active attacks.   7
    (b) Briefly explain classification of social engineering.   7

OR

4. (a) Define cyber stalking. And give the types of cyber stalking.   7
    (b) List out different types of services provided by cloud and explain any two.   7

5. (a) Explain various types of credit card fraud.   7
    (b) Explain RAS security for mobile devices.   7

OR

6. (a) State and explain security challenges posed by mobile devices.   7
    (b) How to hack bluethooth mobile devices ?   7

7. (a) What is denial of service and distributed denial of service attack ?   7
    (b) Describe attacks on wireless networks.   6

OR

MH—452   1   (Contd.)

Model Questions

8. (a) Explain the term stegnography with the help of suitable example.   7

    (b) Define Trojan Horse and state the mechanisms to protect against Trojan Horse.   6

9. (a) What are different types of Identity theft ?   6

    (b) Write a note on personally Identifiable Information.   7

OR

10. (a) What is phishing ? What are various methods of phishing ?   7

    (b) What are the counter measures for Identity theft ?   6

11. (a) What are the punishments for cybercrime in India ?   7

    (b) In Indian context explain the need of cyber laws.   6

OR

12. (a) What are different amendments to the Indian Act ?   7

    (b) Give the significance and implementation of digital signatures.   6

2 / 2

4