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Course : Introduction to Cyber Security   Course Code: CSCS7006P
Program : MCA   Semester   : I
Time   : 03 hrs.   Max. Marks : 100

SECTION A
(Scan and upload)   (5Qx 4M = 20 Marks)

S. No.	Question	CO
Q 1	Write a short note on CIA Triad.	CO1
Q 2	Explain the concept of digital signature. How it is different from digital certificate.	CO2
Q 3	Discuss the concept of Server Hardening and Network Hardening.	CO3
Q 4	Differentiate between the Symmetric and Asymmetric Key cryptography.	CO4
Q 5	How can be Intrusion Detection system is the backbone of Information system? Justify along with its categories.	CO5

SECTION B
(Scan and upload)   (4Qx10M = 40 Marks)

Q 6	a) Mention various types of phishing attacks and their impact. b) Discuss the anti-virus and anti-malware scanning and analysis tools.	CO1
Q 7	Describe various type of malware attacks with suitable examples.	CO2
Q 8	Elaborate Physical and Environmental Security. Mention step to protect a Cybersecurity Domain.	CO3
Q 9	Define cryptography. Discuss any two cipher methods with suitable examples. **OR** Discuss Public key infrastructure (PKI) with suitable example. How does the Public Key Infrastructure (PKI) work?	CO4

SECTION C
(Scan and upload)   (2Qx 20M= 40 Marks)

Q 10	Solve the following Crypt arithmetic problems.	

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        F   O   U   R
    +   F   I   V   E
    _____
        N   I   N   E
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OR

(a) The Caesar cipher shifts all the letters in a piece of text by a certain number of places. The key for this cipher is a letter, which represents the number of place for the shift. For example, a key E means "Right shift 5 places" and key M means "Right shift 13 places".
    i.   What does "CRYPTOGRAPHY" become with a shift of L?
    ii. What key do we need to make "CAESAR" become "RPTHPG"?

(b) Crack the following plaintext
        OAZH HLEOLEXL ZH LEXKMVOLJ. JLXKMVO OAZH.
    Mention the encryption key used in this case.

CO4

Q 11	Mention the compromised hosts, Vulnerabilities and suggest possible security measures in following case:	
	Bureau of Police Research and Development at Hyderabad had handled some of the top cyber cases, including analyzing and retrieving information from the laptop recovered from terrorist, who attacked Parliament. The laptop which was seized from the two terrorists, who were gunned down when Parliament was under siege on December 13 2001, was sent to Computer Forensics Division of BPRD after computer experts at Delhi failed to trace much out of its contents.	CO1 CO5
	The laptop contained several evidences that confirmed of the two terrorists' motives, namely the sticker of the Ministry of Home that they had made on the laptop and pasted on their ambassador car to gain entry into Parliament House and the fake ID card that one of the two terrorists was carrying with a Government of India emblem and seal.	
	The emblems (of the three lions) were carefully scanned and the seal was crafty made along with residential address of Jammu and Kashmir. However, careful detection proved that it was all forged and made on the laptop.	