Abhinav Choudhary 2518

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MEERUT INSTITUTE OF ENGINEERING AND TECHNOLOGY

NH-58, Delhi-Roorkee Highway, Baghpat Road, Meerut – 250 005 U.P.

Pre University Test (PUT): Odd Semester 2022-23

Course/Branch: All Braches **Semester: III**

Subject Name: Computer System Security **Max. Marks : 100**

Subject Code : KNC301 **Time: 180 min**

CO-1: Identify the computer security fundamentals.

CO-2: Identify the legal and ethical issues of information security

CO-3: Understand the concept of Access Control, And Web Security Landscape.

CO-4: Understand the concept of Real world protocol and Security, Apply the concept of Cryptography.

CO-5: Understand the internet Infrastructures and networking protocols such as TCP/IP, ARP, DNS, Ethernet, BGP etc.

Section A–# 20 Marks

Attempt **ALL** the questions. Each Question is of 2 marks (10 x 2 = 20 marks)

Q. No.		COx	Question Description # Attempt **ALL** the questions. Each Question is of 2 marks
1	A	CO1	State the goals of confidentiality policies? (K1)
	B	CO1	Explain Various Computer System Vulnerabilities.(K2)
	C	CO2	Define different three types of UIDS(K1)
	D	CO2	Explain platform and runtime Defense.(K2)
	E	CO3	Explain Intrusion detection system and difficulties in anomaly detection? Explain NIDS. (K2)
	F	CO3	Explain software fault isolation. (K2)
	G	CO4	Discuss How many look-up zones are in DNS?(K2)
	H	CO4	Define i) SSL encryption ii) Hash function (K1)
	I	CO5	Define IDS and its uses.(K1)
	J	CO5	Explain Packet filtering firewall.(K2)

Section – B # 30 Marks

Attempt **ALL** the questions. Each Question is of 6 marks (5 x 6 = 30 marks)

Q.2 (CO-1): Explain Terms in brief: i) - Buffer Overflow
ii) - Sample Attacks
iii) - Format string vulnerabilities (K2)

OR

Explain error 404 phase1. Explain Market place for vulnerabilities. (K2)

Q.3 (CO-2): Describe how many different approaches to use Virtual OS on desktop? (K2)

OR

Explain two problems associated with using ptrace? (K2)

Q.4 (CO-3): Discuss access control in UNIX and Windows NT. (K2)

OR

Discuss how Cross site request forgery attack works? Also mentioned example of CSRF Attack. (K2)

Q.5 (CO-4): Explain RSA algorithm. Perform Encryption and Decryption using RSA for p=11, q=13, e=7, m=9. (K3)

OR

Explain the digital signatures algorithm with diagram. (K2)

Q.6 (CO-5): Demonstrate TCP/IP model in detail? (K3)

OR

Describe how Routing Protocols Supports Routing on Network Layer? Explain any three Protocols. (K2)

Section – C # 50 Marks

Attempt **ALL** the questions. Each Question is of 10 marks.

Q.7 (CO-1): Attempt any TWO questions. Each question is of 5 marks.

a. Explain computer security problem. What factors contribute to it? (K2)

b. Explain zero day vulnerabilities. (K2)

c. Explain web based attacks and system based attack with suitable example. (K2)

Q.8 (CO-2): Attempt any TWO questions. Each question is of 5 marks.

a. Discuss confinement principles and with their approach. (K1)

b. Explain How to detect Rootkits? Explain how to prevent Rootkits. (K2)

c. define: (a) Software fault isolation
(b)System Call Interposition (K1)

Q.9 (CO-3): Attempt any TWO questions. Each question is of 5 marks.

a. Discuss Browser Isolation and Remote Browser Isolation? (K2)

b. Explain defenses and protections against XSS. (K2)

c. Explain cooking Frames and Frame busting. (K2)

Q.10 (CO-4): Attempt any ONE question. Each question is of 10 marks.

a. Explain symmetric and Asymmetric key Cryptography. (K2)

OR

b. Discuss Email Security and DNS Security (K2)

Q.11 (CO-5): Attempt any ONE question. Each question is of 10 marks.

a. Explain DNS revisited and DNS spoofing attack. (K2)

OR

b. Discuss Internet Security with their strength and Weakness of internet security. (K1)