Q. Code:164316

Reg. No. | | | | | | | | | | | | | |

M.E./M.TECH DEGREE EXAMINATIONS, MAY 2024

Second Semester

CP22202 – CYBER SECURITY TECHNIQUES

(Computer Science and Engineering)

(Regulation 2022)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Students will be able to implement the cryptographic techniques to real time applications.	**3**
CO 2	Students will be able to know fundamentals of cybercrimes and the cyber offenses.	**2**
CO 3	Students will be able to realize the cyber threats, attacks, vulnerabilities and its defensive mechanism.	**2**
CO 4	Students will be able to understand the basic concepts of Ethical hacking and Penetration Testing.	**2**
CO 5	Students will be able to understand foot printing and different vulnerabilities in social networks.	**2**

PART- A (20 x 2 = 40 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Compare Substitution and Transposition techniques.	**1**	**3**
2.	Why asymmetric cryptography bad for huge data? Specify the reason.	**1**	**3**
3.	Inspect stream cipher and block cipher with an example.	**1**	**2**
4.	Is Diffie Hellman key exchange protocol is vulnerable during secret key exchange?	**1**	**2**
5.	State Indian perspectives of Cybercrimes.	**2**	**2**
6.	Write about Cyber Cafe and Cybercrimes?	**2**	**2**
7.	State the causes social engineering attacks.	**2**	**2**
8.	How Cybercriminals attack the Cloud Services?	**2**	**2**
9.	List down the signs on identity theft.	**3**	**2**
10.	Appraise the hackers possible tries to crack password.	**3**	**2**
11.	How SQL injection differ from XSS?	**3**	**2**
12.	Write down the vectors on cyber phishing.	**3**	**2**

13.	Investigate the similarities between penetration and vulnerability testing.	**4**	**2**
14.	Express the key features of Non repudiation in security mechanism.	**4**	**2**
15.	How do attackers use remote keyloggers?	**4**	**2**
16.	Discuss the security issues arising from App Stores. List down the threats of mobile malware.	**4**	**2**
17.	Recall Ethical competitive intelligence.	**5**	**2**
18.	Inspect Google dork on vulnerable websites.	**5**	**2**
19.	Outline the most reasonable control to combat dumpster diving.	**5**	**2**
20.	Difference between Enumeration and Scanning.	**5**	**2**

PART- B (5 x 10 = 50 Marks)

			Marks	CO	RBT LEVEL
21. (a)		Demonstrate the secured AES encryption and decryption transmission process over secured communication channel with neat diagram.	**(10)**	**1**	**3**
		(OR)			
(b)	**(i)**	Discuss the salient features on Asymmetric key cryptography.	**(4)**	**1**	**2**
	(ii)	Encrypt and decrypt the plaintext 6 using RSA public key encryption algorithm. Use prime numbers 11 and 3 to compute the public key and private key. Also decrypt the cipher text using the private key.	**(6)**	**1**	**3**
22. (a)		Categorize the criminals attack plan to locate the vulnerabilities on their target.	**(10)**	**2**	**3**
		(OR)			
(b)		Examine the proactive steps to be taken to keep our information falling into the wrong hands. Summarize how to shield yourself and your family from the cyberstalker.	**(10)**	**2**	**3**
23. (a)		How does the keylogger and spyware get on your computer? Discuss the steps involved to detect and prevent from your system.	**(10)**	**3**	**2**
		(OR)			
(b)		Summarize the efforts taken by law enforcement agencies to protect organization standards against DoS and DDoS threats.	**(10)**	**3**	**2**
24. (a)		Predict the various phases of ethical hacking process which helps to identify security vulnerabilities and to resolve before a malicious attacker has the opportunity to exploit them.	**(10)**	**4**	**2**

(OR)

(b)	Illustrate the various countermeasures provided to protect intrusion detection system and firewalls?	**(10)**	**4**	**2**

25. (a)	Investigate the techniques involved in footprinting process and suggest necessary steps to improve the penetration testing skills to fix the vulnerabilities.	**(10)**	**5**	**2**

(OR)

(b)	Comment why social engineering is effective? What are the factors that make organization become vulnerable to social engineering attacks?	**(10)**	**5**	**2**

PART- C (1 x 10 = 10 Marks)

(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Is small business risk at piggybacking attack? Adapt the techniques involved to prevent piggybacking attack from both physical and digital environments.	**(10)**	**5**	**5**

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