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RV COLLEGE OF ENGINEERING
Autonomous Institution affiliated to VTU
DEPARTMENT...OF COMPUTER SCIENCE & ENGINEERING.
III Semester M.Tech (CSE/CNE)
June-2024 Examinations

COURSE TITLE... CYBER SECURITY
(2022 SCHEME)

Time: 03 Hours   *Maximum Marks: 100*

Instructions to candidates:

1. Each unit consists of two questions of 20 marks each.
2. Answer FIVE full questions selecting one from each unit (1 to 5).

		UNIT-I	
1	a	Illustrate with examples why do cyber security is important. Briefly discuss the types of cyber-attacks (10)	
	b	Enumerate the principles of Confidentiality, Integrity and Availability with a neat diagram depicting cyber cube. (10)	20
		OR	
2	a	Discuss information assurance fundamentals essentials in cyber security(10)	
	b	Describe the principles of basic cryptography compare that with symmetric encryption and public key encryption (10)	

		UNIT-II	
3	a	Illustrate with examples attacker techniques and motivations. (10)	
	b	Illustrate with examples the following terms and the characteristics in each case with respect to damage they create in cyber security arena. (10) (i)Virus (ii)Worm (iii) Trojan Horse (iv)Logic Bomb (v) Boot sector Virus	
		OR	20
4	a	Discuss Virtual Machine Obfuscation related to cyber security? Justify how it is useful in a virtual environment to mitigate modern threats? (10)	
	b	Illustrate with a neat diagram concept of Phishing, Smishing, Vishing, and Mobile Malicious Code (10)	

		UNIT-III	
5	a	Illustrate with examples, the techniques used to gain a foothold? (10)	20
	b	Discuss privilege escalation attack in cyber security? (10)	
		OR	

			20
6	a	Discuss in detail, different types of buffer overflows and methods of detection?	
	b	Describe types of vulnerability assignments?	

UNIT-IV			
7	a	Define self-replicating malicious code? How do they operate? Discuss in detail the vulnerability they create ?	
	b	Illustrate with examples the persistence techniques in cyber security?	
		OR	20
8	a	"A computer virus is a malicious software that self-replicates and attaches itself to other files/programs. It is capable of executing secretly when the host program/file is activated" Justify with suitable answers . (10)	
	b	List and discuss briefly the types of persistence in Cyber security?(10)	

UNIT-V			
9	a	Illustrate with examples , phases of abstract Digital Forensic Model (10)	
	b	Give reasons : Why are hash codes important to demonstrate the integrity of digital evidence?"(10)	
		OR	20
10	a	Discuss the concept of chain of custody in digital forensics? (10)	
	b	How do hashing is used to ensure the integrity of information? (10)	

Signature of Scrutinizer: Signature of Chairman

Name: Name: