Code No. : 13154 S (H) N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade

B.E. III-Semester Supplementary Examinations, August-2023

Cyber Security (OE-I)

Time: **3 hours**

Max. Marks: **60**

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What is the cipher text of "good morning" using Caesar cipher?	2	3	1	1,2
2.	Differentiate authorization and authentication.	2	2	1	1,2
3.	What is Rogue Antivirus?	2	2	2	1,2
4.	How and why Attackers use proxies?	2	2	2	1,2
5.	What is the difference between vulnerability and exploit?	2	2	3	1,2
6.	Define shellcode.	2	2	3	1,2
7.	Differentiate Worms and Viruses.	2	2	4	1,2
8.	Define Honeypot. Differentiate low interaction and high interaction honeypot.	2	2	4	1,2
9.	Differentiate Private key Encryption with Public key Encryption	2	2	1	1,2
10.	Define tunneling.	2	2	2	1,2

Part-B (5 × 8 = 40 Marks)

		M	L	CO	PO
11. a)	In a RSA cryptosystem a particular A uses two prime numbers p = 13 and q =17 to generate her public and private keys. If the public key of A is 35. Then what is the private key of A?	4	3	1	1,2
b)	What is a Firewall? Categorize different types of Firewalls. How this firewall is used to prevent unauthorized access to or from a private network? Draw the architecture of the firewall.	4	3	1	1,2
12. a)	What is a Botnet? What is the role of Botmaster? Which server is used to centralize the Botnet Infrastructure? Explain with the help of the figure how the Infrastructure of the different centralize Botnets will work.	4	2	2	1,2
b)	What is a click fraud? Explain about various click fraud techniques in detail with examples	4	2	2	1,2

			M	L	CO	PO
13.	a)	What is SQL injection? How protection against SQL injection is achieved?	4	2	3	1,2
	b)	What is shell code? Write the steps for executing shell code by an attacker with an example.	4	2	3	1,2
14.	a)	Which tool give attackers the ability to execute arbitrary code using vulnerabilities or social engineering. Show how attackers use this tool to install malicious code on victims or users' computers.	4	3	4	1,2
	b)	How DNS amplification attack uses DoS? Discuss about the two different concepts that present in the DNS amplification attack with the help of figure.	4	3	4	1,2
15.	a)	Explain the process of resolution of www.gcogle.com using recursive DNS server.	4	3	1	1,2
	b)	Define firewalls. Explain the working of Firewalls with the help of a neat diagram.	4	2	2	1,2
16.	a)	Differentiate inline and outline sensors in Intrusion Detection System.	4	2	3	1,2
	b)	What are different self-Replicating codes that will affect a system? How can you say that these are called are self-replicating codes? Explain in detail how these codes will be affected.	4	2	4	1,2
17.		Answer any *two* of the following:				
	a)	What is the main role of Fast- Flux? What are the different variants of the fast fluxes techniques?	4	2	1	1,2
	b)	How memory forensics are used? Discuss why memory forensic is important and capabilities of memory forensics	4	2	2	1,2
	c)	Which tool give attackers the ability to execute arbitrary code using vulnerabilities or social engineering. Show how attackers use this tool to install malicious code on victims or users' computers.	4	3	3	1,2

M : Marks;   L: Bloom's Taxonomy Level;   CO; Course Outcome;   PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	0%
ii)	Blooms Taxonomy Level – 2	70%
iii)	Blooms Taxonomy Level – 3 & 4	30%

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