Hall Ticket Number:

Code No. : 13145 S (C)

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. III-Semester Supplementary Examinations, August-2022

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.	Differentiate Authentication, Authorization with an example.	2	1	1	1,2
2.	What is the cipher text of "good evening" using Caesar cipher?	2	2	1	1,2
3.	What is a Rogue Antivirus?	2	1	2	1,2
4.	What is the main role of Fast- Flux? What are the different variants of the fast fluxes techniques?	2	2	2	1,2
5.	What is Cross-Site scripting (XSS)? Explain with an example.	2	2	3	1,2
6.	How DoS is differing from DDoS?	2	2	3	1,2
7.	A majority of spyware authors create their applications to generate revenue. What are the general steps that an attacker takes to generate revenue?	2	3	4	1,2
8.	Draw the infrastructure of a honeypot	2	2	4	1,2
9.	What is "Great Firewall of China spreads to the US" problem?	2	3	1	1,2
10.	How and Why Attackers Use Proxies?	2	2	2	1,2
	Part-B (5 × 8 = 40 Marks)				
11. a)	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
b)	Describe the RSA (Rivest Shamir and Adelman) public key cryptosystem. Bob has public RSA key (n = 65, e = 5) Show that Bob's private key is (d = 29)	4	3	1	1,2
12. a)	What is a click fraud? Explain about various click fraud techniques in detail with examples	4	2	2	1,2
b)	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	3	2	1,2

Contd... 2

13. a)	Consider the following Pseudo code: #create SQL Query containing username Sql_query= " SELECT text,user,timestamo FROM blog_entries where user= ` "+ Username + "`;" #Execute complete query database.execute(sql_query); Using SQL Injection, determine how an attacker can exploit the query. Explain in detail	4	3	3	1,2
b)	What is shell code? Write the steps for executing shell code by an attacker with an example.	4	3	3	1,2
14. a)	How memory forensics are used? Discuss why memory forensic is important and capabilities of memory forensics	4	3	4	1,2
b)	How an Intrusion Detection System works? Explain different types of IDS in detail.	4	2	4	1,2
15. a)	Explain the process of resolution of www.google.com using recursive DNS server.	4	3	1	1,2
b)	What is phishing and how does it work.	4	2	2	1,2
16. a)	Define Rootkit. Differentiate user mode and kernel mode root kits	4	1	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	3	4	1,2
17.	Answer any ***two*** of the following:				
a)	Explain Cipher Block Chaining with a neat diagram.	4	1	1	1,2
b)	What is Man In the Middle Attack? Explain how MITM attack is achieved through Address Resolution Protocol and Doman Name System.	4	3	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	33.33%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	26.67%

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