	RV College of Engineering® Department of Computer Science and Engineering CIE - I: Test Paper		
Course & Code	**INTRODUCTION TO CYBER SECURITY (22EM106)**		**Semester: I**
Date :22 NOV 2023	**Duration:**90 minutes	**Max Marks**: 50 Marks	**Staff :ARA /MH//TP**
USN :	**Name :**		

NOTE: ***Answer all the questions***

Sl.no.	Questions	Marks	* BT	*CO
1.a	Differentiate between Cyber Security and Information Security.	5	L1	CO1
1.b	Discuss the CIA TRIAD model.	5	L2	CO2
2.a	A small, rural hospital contracted with an emergency medical group for emergency department (ED) coverage. The group was paid monthly by EFT from the hospital's account to the ED group's account. In June, the hospital received an email invoice from the ED group with instructions to send payment to a new account. The hospital sent the $200,500 payment to the new account on July 10. On July 12, the payment was returned because the new account was frozen. On July 16, the ED group emailed new account information and instructions to the hospital. The hospital sent the $200,500 payment to the new account. In early August, the ED group sent the next monthly invoice by email with instructions to send the funds to another new account. The hospital sent the $206,500 payment on August 13. Identify and explain the type/types of fraud involved in the above incident. Also discuss the preventive measures to be taken by the hospital.	6	L4	CO2
2.b	Explain any four cyber threats briefly.	4	L2	CO2
3.a	Discuss the benefits of Cyber Security.	4	L2	CO1
3.b	With suitable examples, illustrate about the following cyber-crimes (Any four). i. Online gambling ii. Cyber Defamation iii. Cyber stalking iv. Salami attacks v. Email bombing vi. Data diddling	6	L3	CO2

4.a	A company's security system shouldn't just block a possible IP theft but also raise an alarm when an employee tries to steal sensitive data. Michael was employed at ***XYZ***, a biotech company. He left the company and joined its competitor, ***ABC***, and took with him trade secrets related to the manufacture of a drug. When employed at ***XYZ***, he attempted to email himself secret company information twice but couldn't do it because of the company's security system. He allegedly was successful the third time and he carried that information with him to ***ABC***. Discuss the type/types of crime involved in the above incident. Also explain how it could be prevented.	5	L4	CO2
4.b	What is Cyber Security? Demonstrate the different types of Cyber security.	5	L3	CO2
5.a	Define Cyber Law. Discuss the Advantages of Cyber Laws.	5	L2	CO1
5.b	Is it necessary to report the cyber fraud? Justify your answer with suitable real time incident.	5	L3	CO3

COURSE OUTCOMES:

CO1:	Understand the cyber-attacks and their principles for different domains- social media, E-commerce, and digital devices.
CO2:	Analyse vulnerabilities in different domains that the attacker capitalizes for attack.
CO3:	Apply different attacking techniques that make use of vulnerabilities available in various domains.
CO4:	Evaluate methods to cover different vulnerabilities to safeguard the systems against cyber-attacks.
CO5:	Investigate modern tools and technologies available to mitigate cybercrime attacks.

	L1	**L2**	**L3**	**L4**	**L5**	**L6**	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**5**	**18**	**16**	**11**	**-**	**-**	**14**	**31**	**5**		

	RV College of Engineering® Department of Computer Science and Engineering CIE - II: Test Paper		
Course & Code	INTRODUCTION TO CYBER SECURITY (CS114BT)		Semester: I
Date: 29/12/2023	Duration:90 minutes	Max.Marks : 50 Marks	Staff :MH/ARA/TP
USN :	Name :		

NOTE: *Answer all the questions*

Sl.no.	Questions	Marks	* BT	*CO
1.a	Define passive attack. List and briefly explain the tools used in passive attack	06	L3	CO5
1.b	List and explain the three phases involved in planning a cyber-attack.	04	L3	CO3
2.a	Explain the following in detail i. Shoulder surfing ii. Dumpster Driving	06	L2	CO2
2.b	What are the precautions one need to take when doing online transactions in Cyber Café.	04	L3	CO1
3.a	Consider the following law suite that filed The lawsuit was filed by Lane's Gifts and Collectibles on behalf of all Google advertisers who had used the service since 2002. In a $96 million settlement, Google gave advertising credits that were the equivalent of a $4.50 refund on every $1,000 spent in its advertising network during the previous four and a quarter year. For this, Google said: "We have said for some time that we believe we manage the problem of invalid clicks very well. We have a large team of expert engineers and analysts devoted to it. By far, most invalid clicks are caught by our automatic filters and discarded *before* they reach an advertiser's bill. And for the clicks that are not caught in advance, advertisers can notify Google and ask for reimbursement. We investigate those clicks, and if we determine they were invalid, we reimburse advertisers for them. We will continue to do that and believe that this settlement is further proof of our willingness to work together with advertisers to reimburse invalid clicks". **Identify the type of the attack, motive behind it, ways of doing this attack, its implication and way to avoid this.**	06	L4	CO3

3.b	What are proxies? How and why attackers use proxies.	04	L2	CO2
4.a	What are social networks? List and explain the advantages of social networks.	06	L3	CO1
4.b	With block diagram explain the Pay-per-Click business model.	04	L3	CO3
5.a	The data shows that India, which was primarily a country that used debit cards, is increasingly using credit cards. India recorded 25 crore credit card-based merchant payments in April 2023, overtaking debit card payments which stood at 22 crore. Demonstrate credit card fraud in detail, by explaining the risks involved in it.	06	L4	CO4
5.b	Whether social media influences cybercrime? Justify your answer with at least three valid reasons.	04	L2	CO5

COURSE OUTCOMES:

CO1:	Understand the cyber-attacks and their principles for different domains- social media, E-commerce, and digital devices.
CO2:	Analyse vulnerabilities in different domains that the attacker capitalizes for attack.
CO3:	Apply different attacking techniques that make use of vulnerabilities available in various domains.
CO4:	Evaluate methods to cover different vulnerabilities to safeguard the systems against cyber-attacks.
CO5:	Investigate modern tools and technologies available to mitigate cybercrime attacks.

	L1	L2	L3	L4	L5	L6	CO1	CO2	CO3	CO4	CO5
Marks	-	14	24	12	-	-	10	10	14	06	10

	RV College of Engineering® Department of Computer Science and Engineering CIE - III: Test Paper		
Course & Code	**INTRODUCTION TO CYBER SECURITY (CS114BT)**		**Semester: I**
Date: 24/01/2024	**Duration:**90 minutes	**Max.Marks** : 50 Marks	**Staff :MH/ARA/TP**
USN :	**Name :**		

NOTE: ***Answer all the questions***

Sl.no.	Questions	Marks	* BT	*CO
1.a	Explain the following in detail i. Social Media addiction ii. Cyberbullying	06	L3	CO1
1.b	Discuss the various pitfalls of social networking	04	L2	CO2
2.a	What is Flagging and reporting of inappropriate content. Discuss the Laws regarding posting of inappropriate content.	06	L2	CO4
2.b	Discuss any two social media challenge suggesting appropriate solution for each of the challenge.	04	L3	CO3
3.a	List and explain the various types of e-commerce models	06	L3	CO1
3.b	The main reason for increase in digital payments is demonetization. Discuss about demonetization, its advantages, and disadvantages.	04	L2	CO4
4.a	List and explain any three types of digital payments.	06	L3	CO4
4.b	Discuss any two social media challenge suggesting appropriate solution for each of the challenge.	04	L3	CO2
5.a	Define E-commerce security. Explain different types of threats and issues in E-commerce.	06	L3	CO5
5.b	Differentiate between electronic wallets and bank accounts.	04	L2	CO1

CS114BTF / 22EM106 / 22EM206

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RV COLLEGE OF ENGINEERING®

(An Autonomous Institution affiliated to VTU)

I / II Semester B. E. Regular / Supplementary Examinations Feb-2024

Common to all programs

INTRODUCTION TO CYBER SECURITY (ELECTIVE)

Time: 03 Hours *Maximum Marks: 100*

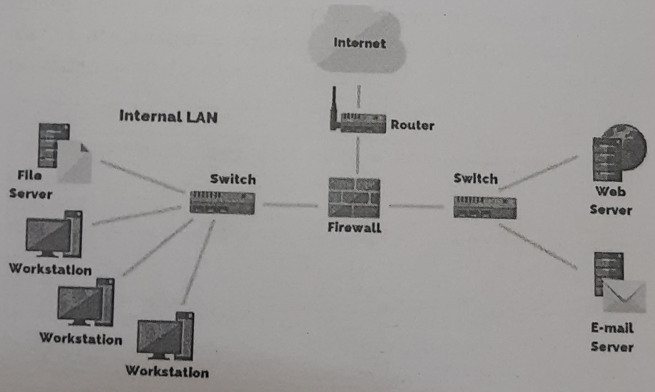
Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B. Question number 2 is compulsory. Choose any one full question from 3 or 4, 5 or 6, 7 or 8 and 9 or 10.

PART-A

1	1.1	_____ is a type of software designed to help the user's computer detect viruses and avoid them.	01
	1.2	Your bank sends you an email asking for your personal information- your account number, password and social security #. You should _____.	02
	1.3	In ethical hacking and cyber security, there are _____ types of scanning.	01
	1.4	Dear *RVCE* Email User, Beginning next week, we will be deleting all inactive email account in order to create space for more users. You are required to send the following information in order to continue using your email account. If we do not receive this information from you by end of the week, your email account will be closed. *Name (first and last): *Email Login: *Password: *Date of birth: *Alternate email: Do you think this is a phishing email or not?	02
	1.5	_____ is actually considered as the first computer virus.	01
	1.6	List different types of hackers.	02
	1.7	Person sells car through "cars24". Which medium of e-commerce is this?	01
	1.8	What is the difference between a virus and a worm?	02
	1.9	Which backup has shorter restore time?	01
	1.10	Through the creation of various types of content (videos, blogs, infographics, etc.), _____ helps promote our business, increase traffic to our website, customer engagement and brand awareness. Share photos using social networking sites using Facebook, Instagram, Twitter, LinkedIn, etc.	02
	1.11	Credit risk to the bank is higher from _____.	01
	1.12	Define the term reconnaissance.	02
	1.13	Rupay card is a _____ type of card.	01
	1.14	Network of infected systems is called _____.	01

PART-B

2	a	Cyber-security is all about securing the Cyber Space. What you mean by Cyber Space? Trace the evolution of Cyber Space from the early computing era of mainframe to present mobile communication. Identify the technical revolutions happened in each transition.	06
	b	Identify and explain in brief the steps involved in the Security System Development Life Cycle (SecSDLC).	06
	c	Differentiate between information security and cyber-security.	04
3	a	*ICICI* bank customers received an email from someone who posed as an official of the bank and asked for sensitive information like the account holders Internet login name and password and directed them to a Webpage that resembled the banks official site. Identify the set of all possible cybercrimes involved in this scenario.	06
	b	Differentiate between password sniffing and email spoofing. Are they same?	04
	c	Give one practical scenarios for the following cybercrimes. i) Data diddling ii) Salami attack.	06
		OR	
4	a	Fig 4a is an example of an enterprise network that contains firewall to filter unsolicited messages, router to connect to the external world, many application servers, many remote access server and workstations. List out the possible vulnerabilities that the attackers looks for the exploitation of the network.  Fig 4a	08
	b	Explain different phases that the criminals plan for their attack.	08
5	a	Identify the type of cybercrime behind the following scenarios. i) Joining the same groups and forums on the online media as the victim and posting the messages. ii) Promising the victim a reward in return for sensitive information or knowledge of its whereabouts. iii) Use of Zbot to harvest banking credentials and financial information from users of infected devices. Once the data was collected, attackers used the bots to send out spam and phishing emails that spread the Zeus Trojan.	

		iv) Attacker delegates a subdomain and configures his machine as the subdomain's authoritative DNS server. v) !!Urgent" Your number has been selected for a 500000 prize guaranteed! To claim your prize, call +423697497459.	
	b	Define hashtag in social media. Explain how to use hashtags effectively on social media.	10 06
		OR	
6	a	Assume that Mr.Rakesh needs to fill an online application for a Government job which needs to pay the application fee in web portal itself. Mr.Rakesh plans to fill online application in a Cyber café, identify and discuss the safety measures he need to follow while filling and after filling the application.	08
	b	Explain the following in detail: i) Social media addiction ii) Cyber bullying	08
7	a	Define *E*-commerce Security. Explain different types of threats and issues in *E*-commerce.	08
	b	You are responsible for the security of an E-commerce website. Explain the key elements of E-commerce security that you should implement to protect customer data.	08
		OR	
8	a	Define digital payment fraud. How does it happen? Explain types of digital payments.	08
	b	You are a compliance officer for a financial institution. Describe the key guidelines provided by the RBI (Reserve Bank of India) regarding digital payments and customer protection in unauthorized banking transactions.	08
9	a	Explain the following in detail: i) *E*-mail security ii) Anti-virus	08
	b	What are the common Wi-Fi security vulnerabilities and how can organizations secure their wireless networks?	08
		OR	
10	a	Define the term firewall. Explain different types of firewalls along with advantages and disadvantages.	08
	b	How can organizations balance security and user productivity when setting permissions?	08