

Total No. of Questions: 6

Total No. of Printed Pages:2

Enrollment No.....



Faculty of Science
End Sem (Even) Examination May-2022
FS3SE05 Cyber Security

Programme: B.Sc. (FS)

Branch/Specialisation: Forensic
Science

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. What is the unauthorised movement of data? **1**
(a) Data infiltration (b) Data exfiltration
(c) Database hacking (d) Data Cracking
- ii. Which of the following is not an example of physical data leakage? **1**
(a) Phishing (b) Dumpster diving
(c) Shoulder surfing (d) Printers and photocopiers
- iii. Which of the following is considered an element of cyber security? **1**
(a) Network Security (b) Operational Security
(c) Application Security (d) All of these
- iv. Choose the features which violate cyber security. **1**
(a) Exploit (b) Attack (c) Compliance (d) None of these
- v. DDoS stands for _____ **1**
(a) Direct Distribution of Server
(b) Distributed Denial of Service
(c) Direct Distribution of Service
(d) Distributed Denial of Server
- vi. The intent of a _____ is to overkill the targeted server's **1**
bandwidth and other resources of the target website.
(a) Phishing attack (b) DoS attack
(c) Website attack (d) MiTM attack
- vii. RSA algorithm is _____ cryptography algorithm. **1**
(a) Systematic (b) Symmetric
(c) Asymmetric (d) None of these

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[2]

- viii. Which of the following modes of operation in DES is used for **1**
operating?
(a) Cipher Feedback Mode (CFB)
(b) Cipher Block chaining (CBC)
(c) Electronic code book (ECB)
(d) Output Feedback Modes (OFB)
- ix. Which is the act which provides legal framework for e-governance in **1**
India?
(a) IT amendment Act 2008 (b) Indian Penal Code
(c) IT act 2000 (d) None of these
- x. How many PCI compliance 'levels' are there? **1**
(a) 1 (b) 2 (c) 3 (d) 4
- Q.2 i. What are the five elements of the NIST Cybersecurity Framework? **2**
ii. Describe the multi factor authentication mechanisms. **3**
iii. What are the various challenges in the way of cybersecurity world? **5**
OR iv. How can we categories various attackers in cybersecurity domain? **5**
- Q.3 i. Discuss Foot printing and reconnaissance in brief. **2**
ii. What are the various aspects in Vulnerability analysis? **8**
OR iii. Discuss the various types of malwares and their behaviour. **8**
- Q.4 i. Elaborate the idea of Injections attacks. **3**
ii. Discuss the various mechanisms to handle the Improper inputs. **7**
OR iii. Explain API attacks in detail. **7**
- Q.5 i. What do you understand by message digest in cryptography? **4**
ii. Discuss Symmetric and Asymmetric algorithms in detail with suitable **6**
examples.
OR iii. Explain Advanced Encryption Standard (AES) in detail. **6**
- Q.6 Attempt any two:
i. Discuss the IT Act India. What are the issues & challenges in its way? **5**
ii. Explain the role of National Institute of Standards and Technology **5**
(NIST).
iii. Discuss your understanding of Center for Internet Security (CIS). **5**

Marking Scheme FS3SE05 Cyber Security

Q.1	i.	What is the unauthorised movement of data?		1
		(b) Data exfiltration	1 Mark	
	ii.	Which of the following is not an example of physical data leakage?		1
		(a) Phishing	1 Mark	
	iii.	Which of the following is considered an element of cyber security?		1
		(d) All of these	1 Mark	
	iv.	Choose the features which violate cyber security.		1
		(b) Attack	1 Mark	
	v.	DDoS stands for _____		1
		(b) Distributed Denial of Service	1 Mark	
	vi.	The intent of a _____ is to overkill the targeted server's bandwidth and other resources of the target website.		1
		(b) DoS attack	1 Mark	
	vii.	RSA algorithm is ____ cryptography algorithm.		1
		(c) Asymmetric	1 Mark	
	viii.	Which of the following modes of operation in DES is used for operating?		1
		(a) Cipher Feedback Mode (CFB)	1 Mark	
	ix.	Which is the act which provides legal framework for e-governance in India?		1
		(c) IT act 2000	1 Mark	
	x.	How many PCI compliance 'levels' are there?		1
		(d) 4	1 Mark	
Q.2	i.	5 elements	2 Marks	2
	ii.	1 method of authentication mechanisms.	3 Marks	3
	iii.	Any 5 challenges	4 Marks	5
		Example	1 Mark	
OR	iv.	Any 3 categories with subcategories with example	5 Marks	5
Q.3	i.	Definition of Foot printing	1 Mark	2
		Reconnaissance in brief.	1 Mark	
	ii.	Figure	1 Mark	8
		Example	2 Marks	
		Types of Vulnerability analysis	5 Marks	
OR	iii.	Any 4 types of malwares	2 Marks each (2 Marks*4)	8

Q.4	i.	Definition	2 Marks	3
		Example	1 Mark	
	ii.	Any 2 mechanisms with suitable example	7 Marks	7
OR	iii.	Any 5 API attacks	7 Marks	7
Q.5	i.	Definition	1 Mark	4
		Example	3 Marks	
	ii.	Definition	2 Marks	6
		Working	3 Marks	
		Figure	1 Mark	
OR	iii.	Definition	2 Marks	6
		Working	3 Marks	
		Figure	1 Mark	
Q.6		Attempt any two:		
	i.	Relevant sections related to computer crime & cyber security (Any 5 section)	5 Marks	5
	ii.	Any 5 role of NIST	5 Marks	5
	iii.	Any 5 role of CIS	5 Marks	5
