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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech
SEM: IV - THEORY EXAMINATION (2021 - 2022)
Subject: Cyber Security

Time: 3 Hours   Max. Marks: 50

General Instructions:
1. The question paper comprises three sections, A, B, and C. You are expected to answer them as directed.
2. Section A - Question No- 1 is 1 marker & Question No- 2 carries 2 mark each.
3. Section B - Question No-3 is based on external choice carrying 5 marks each.
4. Section C - Questions No. 4-8 are within unit choice questions carrying 4 marks each.
5. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

	SECTION A	15

1. Attempt all parts:-

1-a.	Which of the following is a cyber attack? (CO1)	1
	(a) Phishing	
	(b) release of content	
	(c) both	
	(d) availability	

1-b.	Firewall types are - (CO2)	1
	(a) Packet filtering	
	(b) Application Gateway	
	(c) Circuit level Gateway	
	(d) all	

1-c.	Data backup security can be implemented by (CO3)	1
	(a) Assigning,Accountability and responsibilities to the managers	
	(b) forcing the responsibilities on application developers	
	(c) applying firewalls	
	(d) All of the above	

1-d.	A digital signature is a mathematical technique which validates? (CO4)	1
	(a) authenticity	
	(b) integrity	
	(c) Non-repudiation	
	(d) All of the above	

1-e.	What is meant by novelty? (CO5)	1
	(a) old	
	(b) new	
	(c) not useful	
	(d) none	

2. Attempt all parts:-

2.a.	List importance of Risk management. (CO1)	2
2.b.	What is asymmetric key cryptography? (CO2)	2
2.c.	What is Biometric security? (CO3)	2
2.d.	What is the purpose of the S-boxes in DES? (CO4)	2
2.e.	What is the need of cyber law in India ? (CO5)	2

3. Answer any <u>three</u> of the following:-

3-a.	When you use internet, what are possible ways to protect yourself? (CO1)	5
3-b.	You are an employee in a company and your company has a firewall, what all precautions would be needed at your end that company is not taking care of ? (CO2)	5
3.c.	Discuss the physical security of IT Assets? Explain mechanism to attain physical security? (CO3)	5
3.d.	Explain DES in detail with its encryption and decryption process. (CO4)	5
3.e.	What is cloud architecture? How is cloud different from traditional data centers? What are the risks in cloud security? (CO5)	5

<div align="center">SECTION C   20</div>

4. Answer any <u>one</u> of the following:-

4-a.	Discuss Prototype model in detail. (CO1)	4
4-b.	Discuss active attacks in network with suitable example. (CO1)	4

5. Answer any <u>one</u> of the following:-

5-a.	Differentiate between Virus and worms. (CO2)	4
5-b.	What is VPN and how does it provide security? (CO2)	4

6. Answer any <u>one</u> of the following:-

6-a.	Differentiate between Network intrusion detection system and Host intrusion detection system. (CO3)	4
6-b.	"Primary threats on the physical security is physical exposure to human beings". Comment on the statement. (CO3)	4

7. Answer any <u>one</u> of the following:-

7-a.	Explain various key aspects in maintaining cloud security. (CO4)	4
7-b.	Illustrate the mechanism used in securing mail system against spam. (CO4)	4

8. Answer any <u>one</u> of the following:-

8-a.	Explain the term Cybercrime. Discuss 3 examples in detail. (CO5)	4
8-b.	Discuss sample of security policies for a pharma company. (CO5)	4