Roll No: | | | | | | | | | | | | | |

BTECH
(SEM IV) THEORY EXAMINATION 2021-22
COMPUTER SYSTEM SECURITY

Time: 3 Hours *Total Marks: 100*

Note: Attempt all Sections. If you require any missing data, then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** 2*10 = 20

Qno	Questions	CO
(a)	What are the 3 aspects of security?	1
(b)	State the need of Computer Security.	1
(c)	What is the difference between Discretionary Access Control and Mandatory Access Control?	3
(d)	Give three benefits of IPsec?	4
(e)	Describe (A) Sniffing (B) Spoofing	1
(f)	Explain some of the weakness of Internet security.	5
(g)	Explain advanced anti-XSS tools	3
(h)	What is the problem of covert channel in VMM security?	2
(i)	Explain the terms: Cryptography, Cryptanalysis and Cryptology.	4
(j)	In the context of access control, what is the difference between a subject and an object?	3

SECTION B

2. **Attempt any *three* of the following:** 10*3 = 30

Qno	Questions	CO
(a)	Explain any four attacks on Computer System Security.	1
(b)	What is intrusion detection system? Explain host based IDS.	2
(c)	Define Cross site scripting (XSS).	3
(d)	Explain SSL Encryption. What are the steps involved in SSL: server authentication?	4
(e)	What is firewall? Explain different types of firewalls. And also explain the working of packet filtering firewall.	5

SECTION C

3. **Attempt any *one* part of the following:** 10*1 = 10

Qno	Questions	CO
(a)	What is control hijacking with an example? Explain the term of buffer overflow in control hijacking.	1
(b)	What is Access Control list (ACL) and also defined what are the technologies used in access control?	1

4. **Attempt any *one* part of the following:** 10 *1 = 10

Qno	Questions	CO
(a)	Write short notes on	2

PAPER ID-421223

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	I. Software fault isolation II. VM based isolation	
(b)	Define Network based IDS. What are its strengths and limitations.	2

5. **Attempt any *one* part of the following:**   **10*1 = 10**

Qno	Questions	CO
(a)	Define web server threats? And explain 5 major web server threats in detail.	3
(b)	Discuss how vulnerabilities can be exploited in web applications.	3

6. **Attempt any *one* part of the following:**   **10*1 = 10**

Qno	Questions	CO
(a)	List and explain the key participants in secure electronic transaction	4
(b)	Explain and compare key exchange algorithm used in IP sec.	4

7. **Attempt any *one* part of the following:**   **10*1 = 10**

Qno	Questions	CO
(a)	What is Domain Name System? What is Static and Dynamic DNS Record?	5
(b)	What is an Intrusion Detection System? How Does an IDS Enhance Security Management?	5