Printed Pages:02 **Sub Code:KNC401**

Paper Id: 238059 **Roll No.** | | | | | | | | | | |

B. TECH
(SEM IV) THEORY EXAMINATION 2022-23
COMPUTER SYSTEM SECURITY

Time: 3 Hours ***Total Marks: 100***

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

SECTION A

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

(a) Differentiate threat and vulnerability.
(b) Explain integer overflow.
(c) Explain advanced anti XSS tools.
(d) Differentiate IDS and IPS.
(e) Explain web security.
(f) Describe three benefits of IPSec.
(g) Differentiate symmetric and asymmetric encryption.
(h) Explain three-way handshake.
(i) Define firewall with its usage.
(j) Differentiate RIP and OSPF protocol.

SECTION B

2. Attempt any *three* of the following: **10x3=30**

(a) Define control hijacking with an example. Explain buffer overflow in control hijacking.
(b) Compare access control in Windows with the access control in UNIX.
(c) Define cross site request forgery and explain defenses against it.
(d) Explain IP security.
(e) Describe packet filtering firewall along with its types.

SECTION C

3. Attempt any *one* part of the following: **10x1=10**

(a) Discuss vulnerability management for security of computer system.
(b) Explain format string vulnerability attack.

4. Attempt any *one* part of the following: **10x1=10**

(a) Explain the significance of system call interposition.
(b) Demonstrate VM based isolation with example.

5. Attempt any *one* part of the following: **10x1=10**

(a) Explain cross site scripting with XSS finding vulnerabilities.
(b) Explain threat modelling. Also discuss threat modelling methodologies.

6. Attempt any *one* part of the following: 10x1=10

(a) Discuss SHA-512 algorithm in detail by showing its all steps.

(b) Discuss RSA algorithm. Also show the encryption and decryption process by considering P=3, Q=11 and plain text =5

7. Attempt any *one* part of the following: 10x1=10

(a) Elaborate Routing security.

(b) Explain Link Layer connectivity and TCP/IP connectivity.