PAPER ID-411078

Subject Code: KNC401

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

BTECH
(SEM IV) THEORY EXAMINATION 2023-24
COMPUTER SYSTEM SECURITY

TIME: 3 HRS **M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

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

Q no.	Question	Marks	CO
a.	Differentiate between active and passive attacks.	02	1
b.	How can we defend zero-day vulnerabilities?	02	1
c.	Write the differences between SUIT, SGID.	02	2
d.	Explain DCA(Discretionary Access Control).	02	2
e.	Write the name of components of access control system?	02	3
f.	Define frame busting.	02	3
g.	What are the variants of digital signature?	02	4
h.	What do you mean by public key cryptography?	02	4
i.	What are the functions of internet protocol?	02	5
j.	Which protocol is not used in operations of a VPN?	02	5

SECTION B

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

Q no.	Question	Marks	CO
a.	Describe different models used for security.	10	1
b.	What is VM based isolation? Explain its types in detail.	10	2
c.	Explain different threat modelling methodologies in detail.	10	3
d.	What are the components of TLS? Explain the working of TLS.	10	4
e.	Define internet infrastructure and its types in detail.	10	5

SECTION C

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

a.	Explain heap spray attack with its techniques.	10	1
b.	How can an organization protect its computer system hardware? Explain in detail.	10	1

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

a.	Describe detour used in Unix user ids and process ids.	10	2
b.	How can we prevent rootkits?	10	2

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

a.	Describe cross-site request forgery in detail.	10	3
b.	Explain the working of browser isolation.	10	3

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

a.	Explain RSA algorithm. Perform encryption and decryption using RSA algorithm for p=11, q=13, e=7,m=9.	10	4
b.	Explain DNS security threats in detail.	10	4

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

a.	Explain the advantages and disadvantages of different routing protocols.	10	5
b.	How can we prevent DNS rebinding attack?	10	5