



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

TIME: 3HRS**M.MARKS: 50****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.**

Q no.	Question	Marks
a.	What are the key aspects to learn about computer security for individuals and organizations?	2
b.	Can you provide examples of sample attacks commonly encountered in computer systems?	2
c.	What is VM-based isolation?	2
d.	What is the confinement principle?	2
e.	What are cookies?	2
f.	Define browser isolation.	2
g.	What is public key cryptography,	2
h.	What is Transport Layer Security (TLS)?	2
i.	Define Domain Name System (DNS).	2
j.	Define packet filtering.	2

SECTION B**2. Attempt any three of the following:**

a.	In the context of "Error 404: Hacking digital India part 1 chase," what are the main themes or objectives of the hacking endeavor?	10
b.	Explain the significance of detouring Unix user IDs, process IDs, and privileges in enhancing confidentiality within a system.	10
c.	What are cookies, frames, and frame busting in the context of web security, and how do they contribute to protecting user data and preventing attacks?	10
d.	Explain the RSA public key cryptography algorithm, including how key pairs are generated and how encryption and decryption are performed?	10
e.	Elaborate Routing security.	10

SECTION C**3. Attempt any one part of the following:**

a.	What are format string vulnerabilities, and how can attackers exploit them for control hijacking?	10
b.	How do run-time defenses contribute to mitigating control hijacking attacks in computer systems?	10

4. Attempt any one part of the following:

a.	In the context of confidentiality policies, what is the significance of the software fault isolation technique, and how does it prevent data leaks?	10
b.	What role do intrusion detection systems play in upholding confidentiality policies, and how do they detect and respond to potential breaches?	10

5. Attempt any one part of the following:

a.	Explain the concepts of cross-site request forgery (CSRF) and cross-site scripting (XSS), and discuss their significance in web security.	10
b.	What are some of the major threats faced by web servers, and what strategies can be employed to defend against them?	10

6. Attempt any one part of the following:

a.	What is a digital signature, and how does it utilize hash functions to ensure message integrity and authentication in communication protocols?	10
----	--	----



PAPER ID-311228

Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

TIME: 3HRS

M.MARKS: 50

b.	What is IP security (IPsec), and how does it ensure data confidentiality, integrity, and authentication at the network layer?	10
----	---	----

7. Attempt any one part of the following:

a.	What role do intrusion detection systems (IDS) play in internet security, and how do they help in identifying and responding to potential security breaches or suspicious activities within a network?	10
----	--	----

b.	What is the significance of link layer connectivity and TCP/IP connectivity in the context of internet infrastructure security, and how do they contribute to overall network resilience?	10
----	---	----

QP24DP2_143
| 12-03-2024 13:25:24 | 182.71.247.82