

Paper Id: Roll No: 

**B TECH**  
**(SEM-III) THEORY EXAMINATION, 2019-20**  
**COMPUTER SYSTEM SECURITY**

Time: 3 Hours

Total 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

| Qn. | Questions  | Marks |
|-----|--|-------|
| a.  | What is computer security problem? What factors contribute to it?                      | 2     |
| b.  | What is Encryption and Decryption?   | 2     |
| c.  | What are the principles of secure design?  | 2     |
| d.  | What are the difference between HTTPs, SSL and TLS?                                    | 2     |
| e.  | Explain System Call Interposition?   | 2     |
| f.  | What are difference between Discretionary Access Control and Mandatory Access Control? | 2     |
| g.  | What is Web Security?  | 2     |
| h.  | Give three benefits of IPsec?  | 2     |
| i.  | What is SQL injection?   | 2     |
| j.  | What is the problem of covert channel in VMM security?                                 | 2     |

**SECTION- B**

2. Attempt any three of the following:

3 x 10 = 30

|    |  |    |
|----|--|----|
| a. | What is an Intrusion Detection System? What are the difficulties in Anomaly detection?               | 10 |
| b. | Why is security hard?  | 10 |
| c. | What is Access Control list (ACL) and also defined what are the technologies used in access control? | 10 |
| d. | What is Cross site request forgery and what are defences against it?                                 | 10 |
| e. | Explain SSL Encryption. What are the steps involved in SSL: server authentication?                   | 10 |

**SECTION- C**

3. Attempt any one part of the following:

1 x 10 = 10

|    |   |    |
|----|---|----|
| a. | What are Asymmetric Algorithms? Give their advantages, disadvantages. | 10 |
| b. | Why do cyber criminals want to own machines?                          | 10 |

4. Attempt any one part of the following:

|    |  |    |
|----|--|----|
| a. | What is DES? Why were Double and Triple DES created and what are they?                     | 10 |
| b. | Write Short notes on software fault isolation (SFI): i. Goal & Solution, ii. SFI Approach. | 10 |

5. Attempt any one part of the following:

1 x 10 = 10

|    |  |    |
|----|--|----|
| a. | Give a short summary of IP Protocol functions  | 10 |
| b. | What is control hijacking with an example? Explain the term of buffer overflow in control hijacking. | 10 |

6. Attempt any one part of the following.

1 x 10 = 10

|    |  |    |
|----|--|----|
| a. | How are the different approaches to use Virtual OS on desktop?                                       | 10 |
| b. | Write a short note on secret key cryptography. Also list its advantages, disadvantages and examples. | 10 |

7. Attempt any one part of the following:

1 x 10 = 10

|    |   |    |
|----|---|----|
| a. | What is Domain Name System and explain what is DNS cache poisoning?   | 10 |
| b. | Write short notes on following: (i) Cross site scripting (XSS), (ii) Why is HTTPS not used for all web traffic? | 10 |