**IT1**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **January, 2024** | **Common to EC, EE, ME, CE, DS & EI** | | |
| **Seventh Semester** | **Cyber Security** | | |
| **Time:** Three Hours | | **Maximum:** 70 Marks | |
| ***Answer question 1 compulsory.*** | | | **(14X1 = 14Marks)** |
| ***Answer one question from each unit.*** | | | **(4X14=56 Marks)** |
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|  |  |  | CO | BL | M |
| 1 | a) | Define Computer Security | CO1 | L1 | 1M |
|  | b) | What is the difference between diffusion and confusion? | CO1 | L1 | 1M |
|  | c) | What is Steganography? | CO1 | L1 | 1M |
|  | d) | What is a product cipher? | CO2 | L1 | 1M |
|  | e) | Define Asymmetric key Cryptography. | CO2 | L1 | 1M |
|  | f) | What is a Digital Signature? . | CO2 | L1 | 1M |
|  | g) | Define cyber security. | CO2 | L1 | 1M |
|  | h) | What is an attack? | CO3 | L1 | 1M |
|  | i) | Describe the purpose of information gathering. | CO3 | L1 | 1M |
|  | j) | Who are Grey hat Hackers. | CO3 | L1 | 1M |
|  | k) | What is privacy goal of an Ethical Hacker? | CO3 | L1 | 1M |
|  | l) | List any two scanning types. | CO4 | L1 | 1M |
|  | m) | Name some password attacks. | CO4 | L1 | 1M |
|  | n) | What is the purpose of network scanning? | CO4 | L1 | 1M |
| **Unit-I** | | | | | |
| 2 | a) | What are security mechanisms? Explain in what way Mechanisms are related to Services. | CO1 | L2 | 7M |
|  | b) | List and explain the security services of X.800. | CO1 | L2 | 7M |
| **(OR)** | | | | | |
| 3 |  | Explain DES Algorithm and make use of DES Algorithm to convert plain text to cipher text | CO1 | L4 | 14M |
| **Unit-II** | | | | | |
| 4 | a) | How Asymmetric Encryption Algorithm can be used to provide Confidentiality and Authentication service? | CO2 | L2 | 7M |
|  | b) | Perform encryption and decryption using the RSA algorithm for the following.  **P=3, q=11, e=7, M=5** | CO2 | L5 | 7M |
| **(OR)** | | | | | |
| 5 | a) | Describe the Diffie-Hellman Key Exchange Algorithm. | CO2 | L2 | 7M |
|  | b) | How man-in-the-middle attack is possible on the Diffie-Hellman Key Exchange Algorithm? | CO2 | L3 | 7M |
| **Unit-III** | | | | | |
| 6 | a) | Explain in detail about different Hackers classes. | CO3 | L2 | 7 M |
|  | b) | Discuss the concept of privacy on web. . | CO3 | L2 | 7 M |
| **(OR)** | | | | | |
| 7 | a) | What is the impact of Privacy on emerging technologies? | CO3 | L2 | 7M |
|  | b) | Explain privacy on email. | CO3 | L2 | 7M |
| **Unit-IV** | | | | | |
| 8 | a) | Discuss the different types of malwares that exists. | CO4 | L2 | 7M |
|  | b) | What are the two Information gathering tools? Explain. | CO4 | L2 | 7M |
| **(OR)** | | | | | |
| 9 | a) | Explain different types of password attacks. | CO4 | L2 | 7M |
|  | b) | Explain the TCP/IP Protocol stack for network scanning. | CO4 | L2 | 7M |

