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**Presidency University**

**Bengaluru**

**School Of Computer Science and Engineering & Information Science**

**End-Term Examinations, Aug 2024**

**Date**: 06.08.2024

**Time**: 9.30AM -12.30PM

**Max Marks**: 100

**Weightage**: 50%

**Odd Semester**: 2023 - 24

**Course Code**: CSE2041

**Course Name**: Computer Security

**Department: SOCSE**

**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*

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| **Q.No** | **Questions** | **Marks** | **CO** | **RBT** |
| 1 | 1. Define cyber attack. | 4 | CO1 | L1 |
| 1. Explain Ransomware attack. | 6 | CO1 | L2 |
| 1. Apply Ransomware Attack scenario in a bank and explain. | 10 | CO1 | L3 |
| OR | | | | |
| 2 | 1. Define Assets in security. | 4 | CO1 | L1 |
| 1. Illustrate Attack trees with example. | 6 | CO1 | L2 |
| 1. Apply Attack surfaces in an education system and explain. | 10 | CO1 | L3 |

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| 3 | 1. Define CIA triad. | 4 | CO2 | L1 |
| 1. Explain Message Authentication. | 6 | CO2 | L2 |
| 1. Apply RSA algorithm, user uses two prime numbers 5 and 7. He chooses 11 as Encryption key, find out decryption key. What will be the cipher text if the plain text is 2? Decrypt the cipher text, what will be the value of plain text? | 10 | CO2 | L3 |

OR

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| 4 | 1. Define Authentication. | 4 | CO2 | L1 |
| 1. Illustrate Digital Signatures. | 6 | CO2 | L2 |
| 1. Apply RSA algorithm, user uses two prime numbers 3 and 5. He chooses 7 as Encryption key, find out decryption key. What will be the cipher text if the plain text is 3? Decrypt the cipher text, what will be the value of plain text? | 10 | CO2 | L3 |

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| 5 | 1. Define Access Control. | 4 | CO3 | L1 |
| 1. Illustrate Discretionary Access Control | 6 | CO3 | L2 |
| 1. Use attribute based access control in a particular scenario and explain. | 10 | CO3 | L3 |

OR

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| 6 | 1. Define Identity. | 4 | CO3 | L1 |
| 1. Explain Trust Frameworks. | 6 | CO3 | L2 |
| 1. Use Role-Based Access Control in a particular scenario and explain. | 10 | CO3 | L3 |

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| 7 | 1. Define Buffer Overflow | 4 | CO4 | L1 |
| 1. Explain Operating Systems Hardening | 6 | CO4 | L2 |
| 1. Apply legal and ethical aspects in a scenario and explain. | 10 | CO4 | L3 |

OR

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| 8 | 1. Define Stack Overflows | 4 | CO4 | L1 |
| 1. Explain Software Security Issues | 6 | CO4 | L2 |
| 1. Use System Security Planning features and illustrate it. | 10 | CO4 | L3 |

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| 9 | 1. List Security Functional Requirements. | 4 | CO1 | L1 |
| 1. Illustrate Fundamental Security Design Principles. | 6 | CO1 | L2 |
| 1. Analyze security strategies of the particular organization. | 10 | CO1 | L3 |

OR

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| 10 | 1. Define public key encryption system. | 4 | CO2 | L1 |
| 1. Explain pseudo-random numbers with example. | 6 | CO2 | L2 |
| 1. Apply RSA algorithm, user uses two prime numbers 11 and 5. He chooses 7 as Encryption key, find out decryption key. What will be the cipher text if the plain text is 5? Decrypt the cipher text, what will be the value of plain text? | 10 | CO2 | L3 |