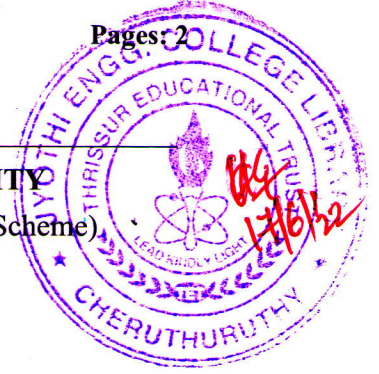


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
Eighth Semester B.Tech Degree Examination June 2022 (2015 Scheme)



Course Code: CS472

Course Name: PRINCIPLES OF INFORMATION SECURITY

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all questions, each carries 4 marks.*

Marks

- |    |   |     |
|----|---|-----|
| 1  | Illustrate how access is granted by an access control matrix with an example. | (4) |
| 2  | Explain brute force attack with example.                                      | (4) |
| 3  | Illustrate Chinese Wall security model with suitable example.                 | (4) |
| 4  | How can we reduce the impact of XSS vulnerabilities?                          | (4) |
| 5  | Differentiate between viruses and worms.                                      | (4) |
| 6  | Explain the term phishing. What are its different types?                      | (4) |
| 7  | How does the entity authentication implemented in UMTS?                       | (4) |
| 8  | Illustrate steps to achieve WEP encryption to transmit data over radio waves. | (4) |
| 9  | Explain various flaws involved in online banking.                             | (4) |
| 10 | Describe SOAP and its characteristics.  | (4) |

**PART B***Answer any two full questions, each carries 9 marks.*

- |    |   |     |
|----|---|-----|
| 11 | a) Differentiate between Discretionary and Mandatory access control policies with examples. | (5) |
|    | b) Demonstrate CIA triad with a diagrammatic representation.                                | (4) |
| 12 | a) State the Star-property for Bell- LaPadula model.  | (4) |
|    | b) Explain Clark-Wilson Model.  | (5) |
| 13 | a) Describe discretionary policies for Biba Model.  | (4) |
|    | b) Interpret the access control mechanism in SE Linux.                                      | (5) |

**PART C***Answer any two full questions, each carries 9 marks.*

- |    |   |     |
|----|---|-----|
| 14 | a) Explain software vulnerability and describe common types of software flaws that lead to vulnerability. | (5) |
|    | b) What all are the common problems that happen when a buffer is overflowed?                              | (4) |

- 15 a) Explain SQL injection vulnerability and its remedies. (5)  
b) Explain the phases of a computer virus. (4)
- 16 a) Explain any two Worm Propagation models. (5)  
b) Where did the Trojan lives and how it infects the computer system? (4)

**PART D**

*Answer any two full questions, each carries 12 marks.*

- 17 a) Demonstrate GSM security architecture and authentication principles. (7)  
b) Explain link level security provided by Bluetooth. (5)
- 18 a) Illustrate with examples various concerns and flaws involved in online credit card payment systems. (5)  
b) Describe the strength and weakness of secure electronic transaction. (4)  
c) Explain the computation of "Dual Signature". (3)
- 19 a) Discuss the frame spoofing and its need. (5)  
b) Illustrate any two SAML assertions types. (4)  
c) Describe any two XML vulnerabilities. (3)

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